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BENCH MARK STUDIES OF SOCIO-ECONOMIC
CONDITIONS OF THE DROUGHT PRONE
AREAS OF UTTAR PRADESH
AND
RAJASTHAN

941

(Sponsored by the Central Water Commission, New Delhi)

DISTRICT PROFILE : HAMIRPUR

R. T. TEWARI
FAHIM UDDIN

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1983

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PREFACE

This profile of Hamirpur district has been prepared as a part of the research project, 'Bench Mark Studies of Socio-Economic Conditions of the Drought Prone Areas of Uttar Pradesh and Rajasthan', sponsored by the Central Water Commission, New Delhi. The profile endeavours to portray the spatial distribution of existing resource potentials of the district and the degree of their exploitation with a view to identifying the major constraints and exploring the possibilities of further development. Apart from accommodating in analysis the major sectors of the economy, the profile summingly highlights the inter-tehsil variations in levels of development.

The profile has been prepared with the overall guidance of the project directors particularly Prof. T.S. Papola and Prof. G.P. Mishra. The team of colleagues associated with the painstaking task of data collection consisted of Shri B.K. Bajpai, Shri D.K. Bajpai, Shri G.S. Mehta, Shri S.D. Rai, Shri Yaminul Hasan, Shri C.S. Adhikari, Shri P.S. Garia, Shri Dinesh Singh, Shri P.K. Tripathi and Shri K.S. Bisht. We acknowledge our sincere thanks to the Directors of Economics and Statistics Division and Area Planning Division of the State Planning Institute, Lucknow for their cooperation in providing us the requisite data/information. We are also thankful to Shri S. Mukherjee and Shri R.S. Bisht, who handled the draft typing and Shri V.K. Arjunan Achary for nice handling of the manuscript.

R.T. TEWARI

December 1983

FAHIM UDDIN

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Chapter-I

GEOPHYSICAL CONDITIONS

The district of Hamirpur with an area of 7166 Sq. Kms. lies between the parallels of $25^{\circ} 7'$ and $26^{\circ} 7'$ north latitude and $79^{\circ} 17'$ and $80^{\circ} 21'$ east longitude. It is bounded by the districts of Kanpur and Fatehpur on the north, Banda on the east, Jhansi and Jalaun on the west and the State of Madhya Pradesh on the south. It is one of the five districts of Bundelkhand region in Southern U.P. and is one of the chronically drought affected districts of the State. The district is divided into six tehsils, i.e., Hamirpur, Maudaha, Kulpahar, Charkhari, Rath and Mahoba. It consists of eleven development blocks namely Sumerpur, Kurara, Sarila, Gohand, Rath, Panwari, Charkhari, Muskara, Maudaha, Jaitpur and Kabrai.

1.1 Physical Division

The district has distinct feature of Bundelkhand region and can be divided into three main natural sub-regions, namely north west plains, the middle plains and the south west plateau according to the soil structure, rainfall, geological situation and vegetation. The north-western part of the district is plain and possesses soil of high fertility called Parua. The fast flowing rivers like Yamuna, Betwa, Dhasan, Birma and many other large streams, have caused considerable scours, and nearby areas of these rivers and streams have changed into

dangerous ravines. The geographical area of Kurara, Sarila, Rath and Gohand blocks falls in this plain. The middle part of the district has rakar soil. It again consists of plains which is free from the problems of soil erosion and ravines and extends to Muskara, Maudaha and Sumerpur development blocks. The south western part of the district is plateau and abounds in rocks and hard stones. Large size ponds of perennial nature are available in this part. The development of agriculture is constrained by adverse geological conditions. The Kabrai, Charkhari, Jaitpur and Panwari development blocks are the major constituents of this area. The land-scape comprises the familiar variety of Bundelkhand region. In the south, numerous out-crops of gneiss rocks, tending to cluster into low ranges, surrounded with stunted jungles, are succeeded by a mere level tract in which the hills grow sparser. From them stretches northward the alluvial plain. The dividing line between these two tracts run roughly east and west through the town of Rath. A few kilometers further south, the hills become more frequent and the southern most tehsils Charkhari, Mahoba and Kulpahar may be described as hilly tracts, though the rocky outcrops seldom exceed 100 or 130 metres above the level at their base.

The summits of the higher rocks often contain a large admixture of felspar and exhibit a great variety of grain and colour, ranging from bluish grey to whitish pink. The course

of the hills may always be traced running in narrow chains, frequently dipping under the soil and appearing at the intervals of 1.5 to 6 Kms. The most marked among these chains runs from Nowgaon to Mahoba, besides the other one stretching from Ajnar to Kulpahar. The most conspicuous peak is the high hill rising over Salat in tehsil Charkhari. No hills are found in north of the town Rath and there is nothing to relieve the Monotonous stretch of black cotton soil which breaks into barren ravines as it approaches the banks of the large rivers. Their courses with the exception of Urmil and Yamuna, are from south to North-East. The Birma river divides the district into two parts. The rivers flow through steep slopes and so carry off the rainy water very quickly causing considerable scours and making ravines. Thus, by denuding the surface soil in hilly tracts and carrying off organic contents, they are steadily improvishing the soil, except where land is protected by embankment.

1.2 Climate

The climate of Hamirpur is characterised by intense heat and dryness except during monsoon, and a pleasant winter. The hot weather starts early in March and reaches its greatest intensity just before the break of monsoon rains and if the latter are delayed, the heat becomes distinctly tiring. The cold weather is somewhat slower in approaching and considerable

heat is experienced during mid-day in November. Frosts are rare but cold weather nights are crisp and chilly. The temperature of the district varies between 28°C and 43°C in summer while in winter it goes down to 2°C - 3°C .

1.3 Rain-fall

The rain-fall is capricious and irregular, a steady even distribution being rare, while heavy fall causing floods alternate with long breaks and widespread failure. The district is generally affected by the bay and sometimes by the Arabian sea monsoon called the monsoon through low pressure. It receives a major portion of the annual rainfall, i.e. 89.76 per cent by the South-West monsoon which commences in the last of June and continues upto the last week of October. During the period 1901-1973, the highest annual rainfall of 1442.76 mm. was recorded in the year 1919 as against the 864.12 mm. normal rainfall of the district. In the year 1918, the lowest rainfall of 332.70 mm. occurred.

The nature of rainfall is considered as erratic when co-efficient of variation is equal to or more than 50 percent in monthly values. As shown in Table 1.1, the values of the co-efficient of variation are generally found to be more than 50 per cent for all the months except July and August where they are 49.95 and 41.24 per cent respectively, indicating thereby the erratic nature of rainfall.

Table 1.1

Normal Monthly Rainfall in District Hamirpur During the Period 1901-1980

Months/ Variables	January	February	March	April	May	June	July	August	September	October	November	December	Annual
Mean (mm)	15.92	12.67	7.02	3.82	6.15	67.88	268.64	288.59	150.61	28.48	7.60	6.81	864.19
S.D.	27.18	18.55	11.69	8.47	8.45	60.86	134.18	118.99	95.36	40.20	18.69	12.64	228.44
C.V.	170.66	146.46	166.60	221.64	137.53	89.66	49.95	41.24	63.32	141.13	245.89	185.67	26.44

Note : S.D. means Standard deviation.

C.V. denotes co-efficient of variation.

1.4 Soil

Connected with the character of the rocks is the character of soils. The soil of the district consists of the well known Bundelkhand varieties namely, Mar, Kabar, Parua and Rakar, the former two commonly known as black and the latter two as light soils. Mar often called 'black cotton soil', is usually supposed to be derived from the decomposition of trap rocks and is through out marked by the constant characteristics of being highly calcareous and adhesive. From its high water retaining capacity, it expands and contracts under the influence of moisture and dryness, becoming fissured by huge cracks in the hot weather. The percentage of clay in the Mar is high i.e., 40-50 per cent but coarse sand and solvable salt is low as is also the case with lime and magnesia. The district has 138762 hectares of Mar which forms 21 per cent of the total area. This soil predominates in the central tracts of the district.

The Kabar soil, which is a coarse grained loam in texture, mature in profile and dark gray to black in colour, has a high clay element between 20 per cent to 50 per cent, the coarse sand and solvable salts being low, lime content about one per cent and magnesia even less. Its prevailing characteristic is extreme adhesiveness which causes it to become quickly dry and cake into hard blocks. On the other hand,

it contains none of the Kankar nodules found in Mar and is much less retentive of moisture. Generally, it appears to be in its superior form, a fine clay tinged with organic matter and in this shape is as valuable as Mar. The lighter qualities, the poorest of which probably contain much sand, which makes them less consistent, are intractable and ungracious soils, needing an evenly distributed and consistent rainfall to render agricultural operations successful. If too much rain falls Kabar becomes a mire, if too little falls, it can hardly be upturned by plough. This soil predominates in the western tract and forms approximately 19.52 per cent of the total area, i.e., 129056 hectares.

Rakar is a refuse soil which occurs on sloping ground, where the action of the water has tended to denude the earth of all its better qualities. It is, thus, not suitable for continuous crop production. It forms nearly about 34 per cent of the total area of the district.

Another soil known as Parua is light colour sandy soil and is found in many forms. Sometimes it has a strong admixture of clay which under the influence of standing water makes it soft and cohesive like a poor variety of Kabar. Sometimes it is a sandy loam closely approaching that of Doab. It is usually less rich in organic matter but its finer texture makes it more responsive to manure and irrigation. Occasionally

Parua is found in an extremely sandy form, generally in the neighbourhood of rivers where it is named as bhat. It predominates in the eastern part of the district, occupying about 25.54 per cent of the total area of the district.

1.5 Land Use

The total reporting area of the district in 1980-81 was 716176 hectares, out of which 70.47 per cent was under cultivation as against 50.91 per cent in the State. The forest covered 5.20 per cent of the total reporting area of the district as against 17.25 per cent in Uttar Pradesh. The culturable waste and fallow land constituted about 14 per cent, as against 6.27 per cent in Uttar Pradesh.

1.6 Forest

Forest is a very important natural resource because it contributes enormously to all round development. The plant growth of the district is characterised by the northern tropical dry deciduous vegetative growth. The half of the northern part of the district is conspicuous of tree-lessness and is bare. The babul trees grow naturally on black soil and in ravines there is generally mixed jungles of small and stunted type. The general trees of the district are Khair, Hingal, Karaunda and Karil. In the hills of Charkhari and Mahoba, the larger area is covered under the forest. The important

tree of the area is tendu. The other common species include Mahua, Samal, Kapur, Dudhi, Karadhai, Sej, Dhaws, Gurja, Dhak - and Khair. The total forest area in the district was 37879 hectares in 1974-75 which declined to 37318 hectares in 1980-81. Thus, the forest area as percentage to total reporting area of the district declined from 5.22 in 1974-75 to 5.21 in 1980-81.

1.7 Rivers and Drainage System

The main rivers of the district are Yamuna, Betwa, Dhasan, Ken and several minor streams. Most of these rivers are perennial in nature arising from Vindhyan slopes of adjacent district. The river Yamuna which forms the northern boundry of the State flows from south to north-east. The stream being well below the level of the southern bank which with few exceptions forms an abrupt cliff in marked contrast to the shelving shore. Stretching inland from the cliff for a varying distances are ravines, carved out by the force of rain. The Yamuna is navigable for boats of small burden. The stream shrinks to small dimension in many places but in rains these are submerged and river forms a fine stretch of water.

The Betwa flows alongwith the north-easterly boundary from the point where the Dhasan joins it in tehsil Rath. The distance which is a straight line does not exceed fifty-six Kms., is nearly doubled by the numerous loops and river forms its

tortuous course. From the latter point to its junction with Yamuna, its channel curves gently first north then south. The bank except at the end of its course in Sumerpur is precipitous and very little alluvial soil is formed between river and the cliff. In the upper reaches, rocks and boulders occur in few places in its bed. The bank except in the few Kms. is usually scoured with ravines. The river brings down large volumes of water in the rains which quickly diminishes when the fall that produces them is over.

The first point at which Dhasan river touches the district is in the isolated village of Kurarakhurd. After seven Kms. towards north, it washes the borders of some isolated group of villages and at an equal distance north again enters the district at Lachura Ghat. For forty six Kms., it forms the district boundary with Jhansi. For some Kms. after leaving Lachura Ghat, its bed is rocky but it soon becomes sandy and continues thus for remainder of its course. The banks like Betwa, are eroded by ravines but these are less extensive on the Hamirpur than on the Jhansi side and the stream is equally shallow.

The only other large river that touches the district is the Ken which flows in a generally north-easterly direction and joins near chilla after flowing for a length of 360 Kms. and draining an area of 28224 Sq. Kms. It has exercised an

important influence through its tributaries. Chief of these is the Chandrawal. This rises in numerous tentacles north west of Mahoba, after cutting across the north western corner of Banda tehsil, it passes on to Maudaha and then seeks its course to the Ken river. Together with its winding affluents, the Sihu and Karonan on the left and Shiam on the right bank, it has caused considerable deterioration along with its course. In the extreme south of Mahoba tehsil, the drainage finds its way into urmel. The stream which is picturesque rocky, flows from west to east.

These rivers and streams constitute the natural drainage line of the district. The course with the exception of the Urmel, is from south to north east. The rapid nature of slopes forces them to carry surplus water quickly and consequently cause considerable scours. The Burma river practically divides the district into two halves. The western part is drained by the Parwaha. East of the Burma, the watershed lies close to that river and there is generally steeper gradient which is reflected in the more easterly trend of the stream. By denuding the surface soil in hilly tracts and by carrying off the organic matter and other soil constituents in the level plain, they are constantly and steadily impoverishing the soil except where the land is protected by embankments.

1.8 Surface and Ground Water Resources

Hamirpur has been identified as a drought prone district by the Ministry of Agriculture. Because of the district being drought prone, assessment of surface and ground water availability and its utilisation obviously becomes relevant here. The sources of surface water include canals, tanks, ponds, lakes, lift pump and bundhis etc., whereas tubewells, pumping sets, persian wheels, masonry wells, etc., are generally used for exploitation of ground water resources.

Surface Water

Surface water is the major source of irrigation here because the district is drained by rivers Yamuna, Betwa and its tributaries viz., Dhasan, Ken and Chandrawal. The Irrigation Commission (1972) has assessed the utilisable annual run off of Ganga basin and its sub-basins. Thus, according to it, the normal annual run off of the district is estimated to be 16211.99 MCM. A major portion of this run off water available in these rivers is not utilised because of the seasonal nature of rivers and geophysical conditions of the district. Moreover, the dry flows of main rivers Yamuna and its tributaries cannot be utilised as the available quantity of water has to be allowed to flow down to meet the commitments down stream. So only 50 per cent of the normal annual run off (811.00 MCM) has been

considered as utilisable flow on account of the above constraints. This estimated utilisable annual run off water was irrigating 66307 hectares of land in 1980-81 which constituted 77.40 per cent of the total irrigation in the district. Among the different sources of surface water, canal was contributing 95.32 per cent followed by other sources (lift pump and bandhis) 3.83 per cent and the rest 0.85 was covered by the pond, lake etc. The following Table shows the area irrigated by different sources of surface water in the year 1980-81.

Table 1.2

Area Irrigated Through Surface Water Resources in
Hamirpur District (1980-81)

Particulars	SOURCES OF SURFACE WATER IRRIGATION				Net irriga- ted area
	Canal	Ponds, Lakes etc.	Other Sources	Total Surface Water	
Hectares	63203	563	2541	66307	85671
Percentage	95.32	0.85	3.83	77.40	100.00

Source: Statistical Bulletin, Hamirpur, 1982, Office of District Economics and Statistics Officer, Hamirpur.

Ground Water

The ground water potentiality of the district depends on the recharging capacity which further depends on the rainfall, canal seepage, return seepage from irrigated fields, seepage from tank, pond, lake and reservoir. Since rainfall is erratic in nature and the district has drought prone character, the total recharge capacity is inadequate to increase the ground water potentialities. Consequently, the ground water sources have minor role in total irrigation of the district as only 22.60 per cent of the total irrigated area is covered by it. The State ground water investigation organisation has assessed the gross recharge in the district as 1410.21 MCM. The net recoverable recharge has been considered as 70 per cent of the gross recharge which comes to 987.14 MCM. The State Ground Water Organisation has suggested that the total usable ground water potential might not exceed 80 per cent of the net recoverable recharge and thus 789.71 MCM water has been assessed as ground water potential still available in the district for further exploitation. The extent of utilisation of ground water resources as on 31.3.1980 was as follows:

Table 1.3

Water Draft Through Ground Water Resources in Hamirpur District

Particulars	State tube- wells	Private tube- wells	Pump- sets	Persian Wheels	Masonry Wells	District
Number	146	615	2331	483	13061	-
Total Draft (MCM)	67.16	13.52	32.62	4.30	71.77	189.37

Source : Report of the Ground Water Investigation Organisation (GWIO), U.P., Lucknow, 1981.

On the basis of the assessed utilisable recharge of the ground water (789.71 MCM) in the district, only 189.37 MCM. was drafted through various sources which comes to only 23.98 per cent of the total ground water potential. The following Table shows the source-wise percentage of area irrigated to total net irrigated area in the district during 1980-81.

Table 1.4

Area Irrigated Through Ground Water Resources in Hamirpur District

Particulars	Tube- wells	Other Wells	Total	Net irriga- ted area
Area (Hectares)	7590	11774	19364	85671
Percentage	39.20	60.80	22.60	100.00

Source : Statistical Bulletin, Hamirpur, 1982, Office of the District Economics and Statistics Officer, Hamirpur.

The district of Hamirpur differs from other districts of DPAP in U.P. in the matter of availability of ground water and its utilisation. The gross, net and utilisable recharge is comparatively on the lower side in Hamirpur. For instance, the total utilisable recharge in Allahabad is estimated at 1352.20 MCM. as against 789.91 MCM in Hamirpur. The total ground water drafted through different sources is 665.42 MCM. in Allahabad as compared to 189.37 MCM. in Hamirpur. Moreover, due to the rocky nature of the soil in many parts of the district and low ground water level, the cost of creation of additional irrigation potential through ground water sources is considerably high which is generally beyond the means of individual farmers.

The State tubewells occupy an important place among the non-traditional sources developed in the district so far. In its support, we find that the percentage utilisation of irrigation potential through non-traditional ground water sources in the district was 59.83, of which around 59 per cent was contributed by the State tubewells alone.

1.9 Minerals

The mineral resources available in Hamirpur district are quite deficient. The only available minerals are pyrophyllite and diaspore. The pyrophyllite is a soft mineral used in paint, paper, cosmetics and ceramic industry. It is specia-

lly used in the manufacturing of Slate pencils and is sometimes called pencil stone. The pyrophyllite is often associated with diaspore and is found in crystals upto 3 to 3.5 cm. in length. The deposits at Gorahri and Barela are estimated at 232000 and 100,000 tonnes. The pyrophyllite is also found at Girwar and Turra. The Gypsum is also found at Surite, Pursini and Pardhi and sand stone are available in plenty near the sides of rivers Betwa and Yamuna. The hill stone is also available in plenty which is used for metalling the roads.

1.10 Live-stock

The total livestock population of the district was 9.34 lakh in 1972, which increased to 9.89 lakh in 1978, showing the growth of 5.84 per cent during this period. The State level livestock population which was 491.99 lakh in 1972 also increased to 532.45 lakh in 1978, experiencing the growth of 6.39 per cent during 1972-78. Thus, the district as well as State experienced the growth in the livestock population during 1972-78 but its growth was higher in the State as compared to the district.

The population of milch cattle in the district was 1.10 lakh in 1972 which constituted 11.85 per cent of the total livestock population. The population of milch cattle in the State was 63.31 lakh which formed 12.87 per cent of the total

livestock population. The milch cattle population in the district increased to 1.11 lakh in 1978 but its proportion to livestock population declined to 11.24 per cent. In the State also, the number of milch cattle increased to 70.15 lakh, claiming 13.40 per cent of the total livestock population. It is, therefore, evident that the proportions of milch cattle to the total livestock population at both Censuses were lower in the district as compared to the State. Moreover, the proportion of milch cattle declined from 1972 to 1978 in the district, whereas it increased in the State. The poor state of milch cattle in the district is visible from the growth in their population during 1972-78. The district level milch cattle population had the growth of only .37 per cent during the period 1972-78 while the State level milch cattle population experienced the growth of 10.80 per cent during this period.

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The density of livestock population in the district was 130 per Sq. Km. in 1972 which increased to 137 per Sq. Km. in 1978, whereas the corresponding densities at the State level were 167 in 1972 and 178 in 1978. Thus, the district as well as the State have experienced the increase in density of livestock population but it was higher in case of the latter.

Chapter-II

HUMAN RESOURCES

2.1 Population

According to 1981 Census, the total population of the district was 11.94 lakh which contributed to the total population of Bundelkhand region and the State by 21.96 per cent and 1.08 per cent respectively. The district population experienced the higher growth of 24.39 per cent during the decade 1961-71 as compared to the region (22.64 percent) and the State (19.76 percent). This pattern was reversed during the decade 1971-81 when the growth of the district population was only 20.84 per cent against the corresponding percentages of 26.74 (region) and 25.49 (State) as would be evident from Table 2.1. A relatively higher achievements under family welfare programme and a higher pace of out-migration owing to frequent droughts seem to have pulled down the growth rate of population in the district during the decade 1971-81.

Regarding the male-female composition of population, we observe that the proportion of males in the district underwent changes during the previous three Censuses of 1961, 1971 and 1981. But the changes in these proportions were almost the same both at the regional and State levels during these static years.

Table 2.1

Population Growth

	1961		1971		1981	
Particulars	Hamirpur khand Region	Bundel- Uttar Pradesh	Hamirpur khand Region	Bundel- Uttar Pradesh	Hamirpur khand Region	Bundel- Uttar Pradesh
TOTAL POPULATION	794449	3498827	73746401	988215	4290978	88341144
i. Male	412917 (51.98)	1838897 (52.56)	38634201 (52.39)	526115 (53.24)	2294571 (53.47)	47016421 (53.22)
ii. Female	381532 (48.02)	1659930 (47.44)	35112200 (47.61)	462100 (46.76)	1996407 (46.53)	41324723 (46.78)
iii. Decennial Growth of Population	-	-	-	24.39	22.64	19.76
RURAL AREA						
i. Population	727896 (91.62)	3024972 (86.46)	64266506 (87.15)	890259 (90.09)	3661945 (85.34)	75952548 (85.98)
ii. Decennial Growth	-	-	-	22.31	21.06	18.18
URBAN AREA						
i. Population	66553 (8.38)	473855 (13.54)	9479895 (12.85)	97956 (9.91)	629033 (14.66)	12388596 (14.02)
ii. Decennial Growth	-	-	-	47.20	32.75	30.70

Note : Figures given in parentheses denote percentages to totals.

Source : District Census Handbook, 1971 and Provisional Population totals, 1981 Census, Paper 1 of 1981 supplement, Director of Census Operations, U.F., Lucknow.

The proportion of rural population to its total in the district in 1961 was 91.62 per cent as against 86.46 per cent in the region and 87.15 per cent in the State. This proportion declined to 90.09 per cent in the district, 85.34 per cent in the region and 85.98 per cent in the State in 1971. According to 1981 Census, the share of rural population further declined to 83.39 per cent, 80.11 per cent and 81.99 in the district, region and the State respectively. In juxtaposition, the share of urban population to total population showed a simultaneous increase in the district, region and the State during the previous three consecutive Censuses. The rural-urban composition of the district population, thus, reveals that (i) although the rural population had a lion share in the total population of the district, region and the State, its proportion was largest in the district; (ii) on the other hand, an increase in urban population was observed at all these levels during the previous three Censuses but its growth rate was relatively at the higher pace in the district as compared to the region and the State. Its low base in the district during 1961 might be one of the reasons.

2.2 Density of Population

The density of population in the district, which was 137 persons in 1971, rose to 166 persons in 1981, resulting in an additional burden of 29 persons for every Sq. Km. of area.

When compared with the density of population of Bundelkhand region and State, Hamirpur district appears to be sparsely populated. In the region, this density was 184 persons in 1981 as against 145 persons in 1971, effecting additional burden of 39 persons per Sq. Km. of area. Similarly, the density of population in the State was 300 persons in 1971 which increased to 377 persons in 1981, showing an increase of additional 77 persons per Sq. Km. of area. Thus, it seems that although Hamirpur district as well as Bundelkhand region are sparsely populated in comparison to the State, the pressure of population on land is relatively less in the district. A relatively lower order of decennial growth rate of population in the district during 1971-81 might be one of the reasons for lower pressure of population on land.

2.3 Sex Ratio

The sex ratio (i.e., females per thousand of males) in the district in 1961 was 924 as compared to 902 in the region and 908 in the State. The sex ratio in 1971 was higher in the district (878) as against region (870) but lower than the State (879). But in 1981, the sex ratio was found to be lower in the district (856) as against the region (857) and the State (886). Thus, it is clear that the district, region and the State have generally experienced a decline in their sex ratios in 1981 Census as compared to 1961 Census, but the

rate of this decline was higher in the district. A slower growth rate of female population in the district (21.12 per cent during 1961-71 and 19.18 per cent during 1971-81) in comparison to the growth rate of male population (27.41 per cent in 1961-71 and 22.29 per cent during 1971-81) might be one of the reasons for a decline in the sex ratio of the district.

2.4 Scheduled Castes

The proportion of scheduled caste population to the total population in the district was 25.70 per cent in 1961, which was higher than 25.36 per cent in the region and 20.90 per cent in the State. Similarly in 1971, the percentage of Scheduled Caste population was higher (25.50 per cent) in the district than those of region (25.30 per cent) and the State (21.00 per cent). At 1981 Census, the proportion of Scheduled Caste population in the district reduced to 24.50 per cent which was lower than the region (25.60 per cent) but significantly higher than the State (21.37 per cent). As the total population of the district shows the higher growth as against region and State during 1961-71, the growth in the Scheduled Caste population of the district also shows the same trend. Moreover, during 1971-81 when the growth rate of district population lagged behind the growth rate of total population in the region and the State, the growth rate of Scheduled Caste population also slid down in the district, as would be evident from the following Table. Thus, the growth rate of

Table 2.2

Scheduled Caste Population

Particulars	1961	1971	1981	Decennial Growth	
				1961-71	1971-81
1. Hamirpur					
i) Total Population	794449	988215	1194114	24.38	20.84
ii) Scheduled Caste	204173 (25.70)	251994 (25.50)	293233 (24.56)	23.42	16.37
iii) Non-Scheduled Caste	590276 (74.30)	736221 (74.50)	900881 (75.44)	24.72	22.37
2. Region					
i) Total Population	3498827	4290978	5429021	22.64	26.52
ii) Scheduled Caste	887355 (25.36)	1085845 (25.30)	1390023 (25.60)	22.39	28.01
iii) Non-Scheduled Caste	2611472 (74.64)	3205133 (74.70)	4038998 (74.40)	22.35	26.41
3. Uttar Pradesh					
i) Total Population	73746401	88341144	110858019	19.79	25.50
ii) Scheduled Caste	15412997 (20.90)	18551640 (21.00)	2345339 (21.37)	20.36	26.42
iii) Non-Scheduled Caste	58333404 (79.10)	69789504 (79.00)	87404680 (78.63)	19.64	25.24

Note : Figures given in parentheses denote percentages to totals.

Source: District Census Handbook, 1971 and Final Population Totals, Paper-1 of 1983, Director of Census Operations, Uttar Pradesh, Lucknow.

Scheduled Caste population in the district is found to be lower than that of non-Scheduled Caste population during the periods 1961-71 and 1971-81.

2.5 Literacy

According to 1981 Census, the literacy percentage in Hamirpur district was 26.27 as compared to 28.69 per cent in Bundelkhand Region and 27.40 per cent in the State.

The literacy among male population of the district was 38.93 per cent in 1981 while the corresponding figures in region and State were 41.50 per cent and 38.90 per cent respectively. The female literacy in the district was 11.48 per cent as compared to 13.75 per cent in region and 14.42 per cent in the State as shown in the following Table:

Table 2.3

Literacy Percentage in 1981

Particulars	(Number)		
	Rural	Urban	Total
1. <u>Hamirpur</u>			
i) Male	191377 (35.68)	59075 (55.20)	250452 (38.93)
ii) Female	37594 (8.18)	25637 (28.09)	63231 (11.48)
iii) Total	228971 (22.99)	84712 (42.72)	313683 (26.27)

Contd...

Table 2.3 contd..

2. Bundelkhand Region

i) Male	871860 (37.17)	343001 (58.96)	1214861 (41.50)
ii) Female	175382 (8.72)	169765 (33.98)	345147 (13.75)
iii) Total	1047242 (24.04)	512766 (47.42)	1560008 (28.69)

3. Uttar Pradesh

i) Male	16982718 (35.40)	5889439 (54.44)	22872157 (38.90)
ii) Female	4231995 (9.86)	3279563 (35.82)	7511558 (14.42)
iii) Total	21214713 (23.34)	9169002 (45.91)	30383715 (27.40)

Note : Figures in parentheses denote percentages to totals.

Sources : Provisional Population Totals, 1981, Paper-1 of 1981 Supplement, Director of Census Operations, U.P., Lucknow.

As shown in the above Table, there is a wide gap in literacy percentage of rural and urban areas of the district during 1981. It was 22.99 per cent in rural areas as against 42.72 per cent in urban areas.

2.6 Labour Force Participation

The proportion of main workers in the total population of the district was 32.72 per cent in 1971 which decreased to 31.15 per cent in 1981. Whereas this decline at the State level was much higher from 30.94 per cent to 29.13 per cent

during the previous decade. So far as the growth of main workers is concerned, it was slower in the district during 1971-81 than the State which might be probably because of lower order of expansion of economic activities in the former.

Table 2.4

Work-Force Participation During 1971 and 1981

(Number)

Particulars	1971		1981		Variations	
	Total Popu- lation	Total Workers	Total Popu- lation	Total Workers	Total Popu- lation	Total Workers
1. Hamirpur						
i) Rural	890259 (90.09)	297901 (92.14)	995817 (83.39)	319921 (86.02)	11.86	7.39
ii) Urban	97956 (9.91)	25429 (7.86)	198297 (16.61)	51993 (13.98)	102.43	104.46
iii) Total	988215	323330 (32.72)	1194114	371914 (31.15)	20.84	15.03
2. Uttar Pradesh						
i) Rural	75952548 (85.98)	23906118 (87.46)	90912651 (81.99)	26879270 (83.21)	19.70	12.44
ii) Urban	12388596 (14.02)	3428337 (12.54)	19973223 (18.01)	5423406 (16.79)	61.22	58.19
iii) Total	88341144	27334455 (30.94)	110885874	32302676 (29.13)	25.52	18.18

Note : Figures in parentheses denote percentages to totals.

Source : District Census Handbook, 1971 and Provisional Population Totals, 1981, Paper-1 of 1981 Supplement, Director of Census Operations, U.P., Lucknow.

As shown above, the proportion of rural main workers in the total rural population of the district was 33.46 per cent in 1971 which declined to 32.13 per cent in 1981 i.e. by 1.33 per cent. The proportion of urban main workers to the total urban population of the district was 25.96 per cent in 1971 which increased to 26.22 per cent in 1981. A decline in the proportion of rural workers during 1971-81 might be on account of the faster growth of urbanisation in the district during this period.

2.7 Male-Female Participation

The participation of males in the total work-force was 85.28 per cent in 1971 which increased to 87.17 per cent in 1981. The female proportion in the workforce was 14.72 per cent in 1971, which declined to 12.83 per cent in 1981. Thus, it becomes clear that females are loosing employment opportunities in the district. The proportion of male participation among the group of cultivators was 94.01 per cent in 1971, that declined to 92.60 per cent in 1981. The female participation in the same group increased to 7.40 per cent in 1981 from 5.99 per cent in 1971. Similarly, the male participation in the household industry and 'others' sector decreased, whereas the female participation in these sectors increased during the period 1971-81. The male participation in the agricultural labourers has increased in 1981 as against 1971 but the female

participation has shown a significant decline. The sex-wise participation of work-force in different sections of the district economy is shown below:

Table 2.5

Sector-wise Participation of Workforce in 1971 and 1981

Workers	(Numbers)					
	1971			1981		
	Male	Fe- Male	Total	Male	Fe- Male	Total
1. Cultivators	157273 (94.01)	10028 (5.99)	167301 (100.00)	184732 (92.60)	14766 (7.40)	199498 (100.00)
2. Agricultural Labourers	72940 (68.22)	33971 (31.78)	106911 (100.00)	77844 (74.35)	26858 (25.65)	104702 (100.00)
3. Household Industry	10229 (90.58)	1064 (9.42)	11293 (100.00)	12426 (86.81)	1888 (13.19)	14314 (100.00)
4. Others	35294 (93.31)	2531 (6.69)	37825 (100.00)	49194 (92.13)	4206 (7.88)	53400 (100.00)
Total	275736 (85.28)	47594 (14.72)	323330 (100.00)	324196 (87.17)	47718 (12.83)	371914 (100.00)

Note: Figures in parentheses denote percentages to totals.

Source: District Census Handbook, 1971 and Provisional Population Totals, Paper-1 of 1981 Supplement, Director of Census Operations, U.P., Lucknow.

2.8 Sectoral Distribution of Workers

While considering the sectoral distribution of workforce, we find that 84.81 per cent (1971) and 81.79 per cent (1981) of the total workforce in the district was engaged in agriculture (cultivators + agricultural labourers) as compared to the 77.38 per cent (1971) and 74.33 per cent (1981) respectively in the State. Thus, agriculture occupies more important position in the economy of the district in comparison to the State.

The proportion of cultivators in the total workforce was 51.74 per cent in 1971 which increased to 53.64 per cent in 1981. The workforce employed in household industries and other sectors also increased from 1971 to 1981. Only agricultural labourers declined from 33.07 per cent in 1971 to 28.15 per cent in 1981 which may be on account of distribution of land to the landless agricultural labourers. The following Table shows the sectoral distribution of workers separately for rural and urban areas of the district during 1971 and 1981. According to the Table, the share of rural workers in the total workers of the district was 92.14 per cent in 1971, which declined to 86.02 per cent in 1981. The proportion of urban workers which was 7.86 per cent in 1971 simultaneously increased to 13.98 per cent in 1981. The decline in the percentage of rural workforce during 1971-81 and the propor-

Table 2.6

Sector-wise Distribution of Workforce in Hamirpur District

	(Number)											
	1971						1981					
Workers	Rural		Urban		Total		Rural		Urban		Total	
0	1	2	3	4	5	6	7	8	9	10	11	12
1. Cultivators	162493 (54.55)	(97.13)	4808 (18.91)	(2.87)	167301 (51.74)	(100.00)	189064 (59.10)	(94.77)	10434 (20.07)	5.23	199498 (53.64)	(100.00)
2. Agri. Labour- ers	103230 (34.65)	(96.56)	3681 (14.48)	(3.44)	106911 (33.07)	(100.00)	94852 (29.65)	(90.59)	9850 (18.94)	9.41	104702 (28.15)	(100.00)
3. Household Industry	9324 (3.13)	(82.56)	1969 (7.74)	(17.44)	11293 (3.49)	(100.00)	10395 (3.25)	(72.62)	3919 (7.54)	27.38	14314 (3.85)	(100.00)
4. Others	22854 (7.67)	(60.42)	14971 (58.87)	(39.58)	37825 (11.70)	(100.00)	25610 (8.00)	(47.96)	27790 (53.45)	52.04	53400 (14.36)	(100.00)
TOTAL	297901 (100.0)	(92.14)	25429 (100.0)	(7.86)	323330 (100.0)	(100.00)	319921 (100.0)	(86.02)	51993 (100.0)	13.98	371914 (100.0)	(100.00)

Note : (i) Figures given in columns 2, 4, 6, 8, 10 and 12 denote percentages to horizontal totals of the respective years, and those given in columns 1, 3, 5, 7, 9 and 11 denote percentages to vertical totals.

Source : District Census Handbook, 1971 and Provisional Population Totals, Paper - 1 of 1981 Supplement, Director of Census Operations, Uttar Pradesh, Lucknow.

tionate increase in urban workforce in the same period is an outcome of faster growth of urbanisation in the district during this period. The proportion of rural cultivators, agricultural labourers, household industry workers and rural workers employed in other sectors have declined during 1971-81, whereas the percentage of urban workers engaged in these sectors have considerably increased. It may, however, be argued that the agricultural activities are predominantly found in rural areas but in our case the proportion of workers engaged in agriculture has shown relatively a higher increase in urban areas than that of rural areas. This is obviously true also because the small towns and their neighbouring villages which were the rural parts of the district in 1971, were classified as urban areas in 1981 because of concentration of population in these towns. The modernisation has undoubtedly taken place to some extent in such urban cores but agriculture as a main occupation is still continuing with the same momentum and vigour as it was experienced previously.

2.9 Urbanisation

The percentage of rural population to the total population of the district, as evident from Table 2.1, has been higher in 1961, 1971 and 1981 Censuses as compared to the corresponding percentages of the region and the State. But the pace of urbanisation, which is defined as a process of

absorption of peasants and rural people into a modern State, has been much faster in the district as against region and State. For instance, the growth of urban population was 47.20 per cent during 1961-71 in the district as compared to the growth of 32.75 per cent in the region and 30.70 per cent in the State. Similarly, during the period 1971-81, the growth in the urban population of the district was 102.40 as against 71.91 per cent in the region and 61.20 per cent in the State.

2.10 Changes in Size and Growth of Towns

An incessant rising trend of urban population has brought about changes in the proportion of population of each size class towns in the district. The population claimed by different class towns is given in the following Table:

Table 2.7

Details of Class Towns and Their Population

Sl. Class No. Towns	1971		1981	
	Total num- ber of Towns	Total Popu- lation	Total num- ber of Towns	Total Popu- lation
1. I	-	-	-	-
2. II	-	-	-	-
3. III	2	52768 (53.87)	4	114598 (57.79)
4. IV	3	45188 (46.13)	4	55769 (28.13)
5. V	-	-	4	27930 (14.08)
6. VI	-	-	-	-
TOTAL	5	97956 (100.00)	12	198297 (100.00)

Note : Figures given in parentheses denote percentages to totals.

Source : District Census Handbook 1971 and Provisional Population Totals, Paper - 1 of 1981 Supplement, Director of Census Operations, U.P., Lucknow.

The above table reveals that although the number of towns in class III and IV increased and a new class of towns, i.e., class V emerged in 1981 but the growth of class III towns in terms of number and population has outstripped all other categories of towns, indicating the tendency to cross the class barrier to go into higher size groups. A higher increase in urban population of the district during Seventies is probably on account of emergence of new towns and also due to concentration of population in previous towns. When growth in urban population is viewed in this context, it seems that large size towns still claim the majority of urban population, indicating the deepening tendency of urbanisation rather than the widening in the district.

Chapter -III

INCIDENCE OF DROUGHT ON AGRICULTURE

As analysed in the first Chapter, the nature of rainfall in the district is erratic and rivers are seasonal in character. Consequently, the surface and ground water availability in the district is of lower order. The lower availability of ground and surface water has resulted into the low level of irrigation in the district where only 16.97 per cent was net irrigated area of the net area sown during 1980-81. Moreover, there exists wide gap between the irrigation potential created and its utilisation in the district. The total irrigation potential created in the district was 1.22 lakh hectares in 1976-77 which increased to 1.80 lakh hectares during 1980-81, showing the growth of 47.54 per cent, whereas the utilisation of total created potential increased from 84 thousand hectares to about 86 thousand hectares, showing the growth of 2.38 per cent only. Besides, the existing irrigation potential of the district is still untapped to a very large extent as in the case of ground water, 76 per cent of the utilisable ground water is still available for tapping, besides surface water.

Thus, the erratic nature of rainfall alongwith low availability and utilisation of ground and surface water, the district is drought prone. With the result, there is loss of not only agricultural production but also of the fixed and

and flexible property, human and livestock population, etc. But owing to data constraints, the efforts have been made here to assess and analyse the impact of drought on agriculture only.

3.1 Drought and Its Impact on Agriculture

The occurrence of drought in India is the result of large scale fluctuations in rainfall both in quantum and time. The rainfall may be interspersed with prolonged periods of dry spells. It may not be sufficient to meet the requirements of crops. The rainfall may be so scanty that the soil moisture reserves may not be replenished but rather get depleted and become completely inadequate to support any plant growth. Such types of droughts are common both in humid and semi-humid areas. The drought occurrence and its severity has been measured in different ways by different organisations. The Irrigation Commission has defined drought as a situation in an area when the rainfall is less than 75 per cent of the normal. When the rainfall shortage is between 25 to 50 per cent, the nature of the drought may be called moderate. The nature of the drought may be severe when the rainfall deficiency is above 50 per cent of the normal. The National Commission on Agriculture has defined drought when the rainfall in a week is half of the normal or less when weekly normal rainfall is 5 mm. or more. On this criterion, drought

can occur in two ways; (a) the rainfall less than 10 mm. in a month, and (b) absence of rainfall in a period of four consecutive weeks.

The district authorities of Hamirpur with the consent of State Government use the Annawari method of identifying drought and its severity. Annawari is a system to estimate the conditions of crops by visual assessment in terms of yield in the ratio of annas to rupee. The scarcity is declared only when the production is less than 50 per cent of normal. The identification of drought during pendency of cropping season is done only by usual inspection at the end of harvesting. However, the crop cutting experiments are conducted by a Committee consisting of a representatives from the district and also of local level. The yield of that particular year is juxtaposed to normal yield which is an average of ten years yield.

With a view to assessing the impact of drought on agriculture and its severity over the period of 31 years (1950-51 to 1980-81), efforts have been made here to estimate the loss incurred in agriculture for the declared drought years. The total period of 31 years has been divided into two sub-periods, i.e., pre-Green Revolution (1950-51 to 1964-65) and Post-Green Revolution (1965-66 to 1980-81). This division is made just

to accommodate in analysis the technological changes introduced in Indian Agriculture during the period of the Green Revolution.

The district of Hamirpur was declared drought affected in the years 1950-51, 1957-58, 1959-60, 1962-63, 1963-64 and 1964-65 during the Pre-Green Revolution period and 1965-66, 1966-67, 1972-73, 1973-74, 1974-75, 1975-76, 1976-77 and 1979-80 during the Post-Green Revolution period. The loss in agriculture is measured ^{in terms of} area, production and productivity separately for total foodgrains, sugarcane and potato.

An assessment of the impact of drought on agriculture for different drought years has been done by comparing the actuals of area, production and productivity of a particular drought year with the normals of area, production and productivity where Normals are defined as mean values of the time series data of area, production and productivity separately for two sub-periods. The impact of drought on agriculture, thus, arrived at is shown in the Table 3.1.

It would be evident from the Table that out of the 14 declared drought years, only 7 years in foodgrains, 8 years in sugarcane and 6 years in potato experienced loss in cultivated area. Similarly, 11 years in foodgrains, 9 years in sugarcane and 8 years in potato experienced production loss,

Table 3.1

Impact of Drought on Agriculture in Respect of Foodgrains, Sugarcane and Potato
(Percentage)

Period/Drought Period	Foodgrains			Sugarcane			Potato		
	Area	Production	Productivity	Area	Production	Productivity	Area	Production	Productivity
A. Pre-Green Revolution									
1. 1950-51	-10.12	-23.37	-14.71	+30.92	+11.76	-14.63	-16.76	-17.80	-1.25
2. 1957-58	-2.09	-14.06	-12.16	+22.99	-6.97	-24.36	-2.07	-10.54	-8.64
3. 1959-60	+5.04	+5.67	+0.57	-41.27	-50.45	-15.62	+38.73	+84.31	+32.86
4. 1962-63	+5.35	-10.86	-15.42	+17.62	+38.72	+17.94	+51.79	+42.86	-5.88
5. 1963-64	+6.79	-5.56	-11.46	-32.98	-24.10	+13.26	+20.78	-20.14	-33.88
6. 1964-65	+9.36	+2.05	-6.65	-2.61	+59.95	+64.25	+82.80	+132.79	+27.35
Combined	+2.39	-7.69	-9.48	-.89	+4.82	+5.78	+29.21	+35.25	+4.69
B. Post-Green Revolution									
Period									
1. 1965-66	-1.64	-7.20	-5.58	+74.29	+47.88	-15.13	-11.83	-31.17	-21.90
2. 1966-67	-7.17	-41.25	-36.71	-8.91	-40.88	-35.08	-43.06	-70.42	-48.03
3. 1972-73	+2.53	+41.93	+38.47	+3.81	-11.98	-15.19	+3.78	-17.57	-20.54
4. 1973-74	+2.48	-11.49	-13.66	+24.75	+3.07	-17.36	-12.75	-31.63	-21.61
5. 1974-75	-4.09	-26.55	-23.64	-2.04	-16.54	-14.79	+55.22	+37.97	-11.07
6. 1975-76	-3.06	-10.27	-7.49	-32.42	-28.84	+5.33	+2.87	+15.39	+12.23
7. 1976-77	-1.79	-0.18	+1.62	-31.13	-4.40	+38.84	+3.78	+13.24	+9.15
8. 1979-80	+3.18	-48.86	-50.51	-30.86	-46.44	-22.51	-43.06	-45.15	-3.63
Combined	-1.19	-23.42	-22.17	-0.34	-12.27	-11.98	-5.63	-16.17	-11.13

Note : Minus (-) indicates percentage loss to normals, whereas Plus (+) denotes the percentage gains.

Source : Bulletin of Agricultural Statistics, Directorate of Agriculture, Uttar Pradesh, Lucknow.

whereas the number of years experiencing loss in productivity was 11 years in foodgrains, 9 years in sugarcane and 10 years in potato. The nature of drought is found to be most severe in the year 1966-67, followed by 1979-80, 1957-58, 1950-51, 1965-66 and 1974-75.

The above table also reveals that the frequency of drought in terms of number of declared drought years was much less (six years) in the Pre-Green Revolution period (1950-65) as compared to the period of Green Revolution and onwards (1965-81) during which the frequency of declared drought years was relatively higher (eight years). Consequently, on an average, the loss in agriculture is found to be of lower order in the former period as compared to the latter one. In its support, we observe that the loss of area in respect of foodgrains, sugarcane and potato during the latter period was respectively 1.19 per cent, .34 per cent and 5.63 per cent of their respective normal areas. Contrary to this, in the former period we find that there was a gain in terms of area in respect of foodgrains and potato crops by 2.39 per cent and 29.21 per cent of their normals respectively, and a loss of hardly one per cent of area in case of sugarcane.

Moreover, the loss of production in respect of Foodgrains, Sugarcane and Potato during the latter period is also found to be of the order of 23.42 per cent, 12.27 per cent and 16.17 per

cent respectively, whereas in case of the former period, the corresponding loss of production was to the tune of 7.69 per cent in respect of Foodgrains but the gains of 4.82 per cent and 35.25 per cent in case of Sugarcane and Potato respectively.

Besides, the loss of productivity in respect of Foodgrains, Sugarcane and Potato during the latter period was estimated to be 22.17 per cent, 11.98 per cent and 11.13 per cent respectively but in case of the former period the corresponding loss of 9.48 per cent was experienced in case of foodgrains but the gains of productivity in respect of sugarcane and potato by 5.78 per cent and 4.69 per cent respectively.

In the above context, it appears that adoption of seed - fertilizer - irrigation technology during the Green Revolution period has not proved to be effective in minimising the affect of drought on agriculture in the district. In fact, the adoption of aforesaid modern technology primarily rests upon the availability and use of irrigation facilities. In case of Hamirpur district, we find that in spite of the appreciable increase in major and minor irrigation sources, the utilisation of the irrigation potential thus created is quite low (47.62 percent). With the result, the irrigation coverage remained almost constant at about 17 per cent during the previous decade inhibiting more and more use of the other agricultural inputs.

In some of the years, although there was a decline in area and production, the productivity showed a significant improvement. This appears to be sensible also because during drought years farmers, in general, make concerted efforts to make intensive use of cultivation on those pieces of land which are adequately served with assured means of irrigation. This enables them to make the maximum possible use of improved seeds, fertilizers and pesticides, finally resulting in higher productivity.

Chapter-IV

AGRICULTURE

Agriculture is the mainstay of population in Hamirpur as majority of the people depend upon it for their livelihood. In Hamirpur district, 83.39 per cent of the total population lived in rural areas, and 81.79 per cent of the total work-force were engaged in agriculture as cultivators and agricultural labourers during 1981 Census. Consequently, the contribution of primary sector to total net domestic product of the district was 91.17 per cent during 1980-81. However, the erratic nature of rainfall alongwith low level of irrigation facilities made conditions unfavourable for increasing the agricultural productivity of various crops. The net irrigated area as percentage of net area sown was only 16.97 per cent during 1980-81. The double cropped area as percentage of net area sown was also 4.42 per cent only. Moreover, the coverage of area under high yielding varieties was as low as 3.31 per cent in case of wheat and 7.22 per cent in paddy.

4.1 Size of Land Holdings

The total holdings in the district in 1970-71 were 1,89,492, which increased to 2,15,758 during 1976-77, showing a growth of 13.86 per cent. Contrary to this, the total operated area in the district decreased from 5,60,352 hectares to 5,56,033 hectares during this period, showing a negative

growth of 0.77 per cent. An increase in number of operational holdings in the district seems to be an outcome of an increase in sub-division and fragmentation of land holdings and the distribution of culturable waste and surplus land procured under the Land Ceiling Act among the landless agricultural labourers. On the other hand, a decline in the total operated area of the district might be the consequence of faster growth of urbanisation due to which more and more land is put to non-agricultural uses. The classification of total holdings of the district into marginal, small, semi-medium, medium and large categories, in terms of number and area operated in each group is shown in the following table:

Table 4.1

Number and Area of Holdings under Different
Farm Size Groups

Category	No. of operational holdings		Percentage variation in 1976-77 over 1970-71	Operated Area		Percentage variation in 1976-77 over 1970-71
	1970-71	1976-77		1970-71	1976-77	
1. Marginal (Below 1 ha.)	67285 (35.51)	81152 (37.62)	20.61	32838 (5.86)	40437 (7.27)	23.14
2. Small (1-2.0 ha.)	40715 (21.49)	50866 (23.57)	24.93	58788 (10.50)	74445 (13.39)	26.63
3. Semi-medium (2.0-4.0 ha.)	39132 (20.65)	43645 (20.23)	11.53	109967 (19.62)	121361 (21.83)	10.36
4. Medium (4.0-10.0 ha.)	32267 (17.03)	32156 (14.90)	- 0.34	197884 (35.31)	198287 (35.66)	0.20
5. Large (10.0 and above)	10093 (5.32)	7939 (3.68)	-21.34	160875 (28.71)	121503 (21.85)	-24.47
Total	189492 (100.00)	215758 (100.00)	13.86	560352 (100.00)	556033 (100.00)	- 0.77

Source : Agricultural Censuses, 1970-71 and 1976, Uttar Pradesh.

The above Table shows that the percentage of marginal holdings to the total holdings in 1970-71, was 35.51 which increased to 37.62 per cent in 1976-77, showing a growth of 20.61 per cent. Similarly, the area operated under the marginal holdings also increased from 5.86 per cent in 1970-71 to 7.27 per cent in 1976-77, with the growth of 23.14 per cent. The number of small holdings (1-2 hectares) also increased from 21.49 per cent in 1970-71 to 23.57 per cent in 1976-77, showing the growth of 24.93 per cent. The area operated under this category also increased from 10.50 per cent in 1970-71 to 13.39 per cent with comparatively highest growth of 26.63 per cent. Although the percentage of semi-medium holdings to the total holdings decreased marginally from 20.65 per cent in 1970-71 to 20.23 per cent in 1976-77, the total number of holdings in this category increased by 11.53 per cent during 1976-77. The area operated under this category also increased from 19.62 per cent in 1970-71 to 21.83 per cent during 1976-77, showing the growth of 10.36 per cent. The percentage of medium size holdings to total holdings decreased from 17.63 per cent in 1970-71 to 14.90 per cent in 1976-77, experiencing the negative growth of .34 per cent, but the area operated in this category increased from 35.31 per cent in 1970-71 to 35.66 per cent in 1976-77, with the growth of .20 per cent during 1970-77.

The pattern of positive growth in terms of number and area operated is reversed in case of large holdings. The percentage of large holdings to total holdings decreased from 5.32 per cent in 1970-71 to 3.68 per cent in 1976-77 with a negative growth of 21.34 per cent. The area operated under this category also decreased from 28.71 per cent in 1970-71 to 21.85 per cent in 1976-77, with the negative growth of .77 per cent. The two main conclusions emerge from these factual statistics:

i. The overall number of operational holdings in the district increased during the period 1970-77, but the total area operated showed a marginal decline. This trend emerged because of the distribution of land by the Government among the landless agricultural labourers and the increase in subdivision and fragmentation of land holdings. The fall in the total operated area might be because of the increase in the area put to non-agricultural uses;

ii. The numbers and areas operated by marginal, small, and semi-medium holdings showed a considerable increase during this period in the district because of the distribution of land among the cultivators of these categories and fragmentation of land holdings resulting from split of joint families in this group.

4.2 Average Size of Holdings

The average size of holdings in the district in 1970-71 was 2.96 hectares as compared to the State level average of 1.16 hectares. Similarly, in 1976-77, the average size of holdings in the district was 2.58 hectares which was again higher than the State level average of 1.05 hectares. The following table shows the average size of holdings available in the district and the State at two points of time, i.e., 1970-71 and 1976-77:

Table 4.2

Average Size of Holdings

(Hectare)

Sl. No.	Farm Size Groups	1970-71		1976-77	
		Hamirpur	Uttar Pradesh	Hamirpur	Uttar Pradesh
1.	Marginal (Below 1 ha.)	.49	.37	.50	.36
2.	Small (1 - 2.0 ha.)	1.44	1.40	1.46	1.39
3.	Semi-Medium (2.0-4.0 ha.)	2.81	2.75	2.78	2.73
4.	Medium (4.0-10.0 ha.)	6.13	5.75	8.17	5.66
5.	Large (10.0 and above)	15.93	16.07	15.30	15.43
TOTAL		2.96	1.16	2.58	1.05

Source : Statistical Bulletin, Hamirpur, Office of the District Economics and Statistics Officer, Hamirpur.

It is clear from the above table that the average size of holdings in all farm size groups except in large farm size group, was higher in the district in comparison to the State. A higher average size of holdings in the district is obviously because of district being sparsely populated. The man-land ratio comes to 0.60 only in the district as compared to 1.39 in the State.

4.3 Land Use Pattern

The net area sown in the district in 1974-75 was 66.88 per cent of the total reporting area, which increased to 70.47 per cent during 1980-81. This increase in the net area sown might have been possible because of the exploitation of culturable waste and fallow land which declined from 18.34 per cent in 1974-75 to 14.30 per cent during 1980-81.

The percentage of area under forest and miscellaneous trees, groves and orchards also declined respectively from 5.22 per cent and 0.35 per cent in 1974-75 to 5.20 per cent and 0.32 per cent during 1980-81. The area under pasture was also insignificant in the district and marginally increased from 0.07 per cent in 1974-75 to 0.08 per cent in 1980-81 as shown in the following table:

Table 4.3
Land Use Pattern in Hamirpur

Particulars	(Hectare)			
	1974-75		1980-81	
	Area	Percentage	Area	Percentage
1. Reporting Area	725612	100.00	716176	100.00
2. Forest	37879	5.22	37318	5.20
3. Culturable Waste	56303	7.76	34354	4.80
4. Fallow Land	76769	10.58	68052	9.50
5. Barren and Unculturable Waste	27409	3.78	25396	3.55
6. Land put to non- agricultural uses	38870	5.36	43531	6.08
7. Pasture Land	536	0.07	547	0.08
8. Area under mis- cellaneous trees, groves, orchards not included in net area sown	2556	0.35	2281	0.32
9. Net area sown	485290	66.88	504697	70.47
10 Cropping Intensity	103.87	-	104.42	-

Source : Statistical Bulletin, Hamirpur, Office of the
 District Economics and Statistics Officer,
 Hamirpur.

The inter-block variations in the land use pattern of the district reveals that the percentage of net area sown to total reporting area during 1974-75 was the highest (77.10 per cent) in Maudaha block while it was the lowest (51.66 per

cent) in Jaitpur block. The Maudaha and Jaitpur blocks claimed the highest (80.09 per cent) and the lowest (54.05 per cent) positions respectively in the net area sown during 1980-81. The seven blocks of the district namely Sarila, Rath, Panwari, Charkhari, Muskara, Jaitpur and Kabrai have the percentage of net area sown lower than the district average in 1974-75. The positions of these blocks in terms of percentage of net area sown remained below the district level even during 1980-81 except the Muskara coming above the district average while Kurara going below it. These variations in the percentages of net area sown among different blocks of the district reveal that the net area sown considerably increased in those blocks where the culturable waste and fallow land were brought under cultivation. For instance, the Jaitpur block which had lowest percentage of net area sown to total reporting area during 1974-75 and 1980-81, also had the highest percentage (29.25) of culturable waste and fallow land (Annexure-I). Thus, there appears to be, a wide scope for increasing the net area sown by bringing maximum possible area of culturable waste and fallow land under cultivation.

The cropping intensity in the district showed a marginal increase from 103.87 per cent in 1974-75 to 104.42 per cent in 1980-81. This increase was possible probably because of slight increase in the percentage of net irrigated area

to net area sown from 16.87 per cent in 1974-75 to 16.97 per cent during 1980-81. Rath block had the highest cropping intensity (113.22 per cent) in 1974-75 while Kurara had the lowest (100.15 per cent). This cropping intensity in 1980-81 was the highest (109.08 per cent) in Jaitpur and the lowest (101.42 per cent) in Sarila.

4.4 Cropping Pattern

Jowar/Bajra in Kharif and wheat and gram in Rabi season are the major crops of the district. The percentage of area covered under foodgrain crops to gross cropped area in the district in 1974-75 was 91.40 which increased to 93.51 during the year 1980-81, as would be evident from the following table:

Table 4.4

Area Under Different Crops in Hamirpur

		(Hectare)		
Sl. No.	Crops	1974-75	1980-81	Percentage increase/decrease
0	1	2	3	4
1.	Paddy	6624 (1.31)	3977 (0.75)	60.04
2.	Wheat	130017 (25.79)	158596 (30.09)	121.98
3.	Other Cereals	103505 (20.53)	106608 (20.24)	103.00
4.	Total Cereals	240146 (47.64)	269181 (51.08)	112.09

Contd...

Table 4.4 contd..

0	1	2	3	4
5. Urd		3519 (0.70)	5332 (1.01)	151.52
6. Moong		59 (0.01)	586 (0.11)	993.22
7. Arhar		31071 (6.16)	31011 (5.88)	99.81
8. Gram		174131 (34.54)	171685 (32.58)	98.60
9. Other Pulses		11795 (2.34)	14996 (2.85)	127.14
10. Total Pulses		220575 (43.76)	223610 (42.43)	101.38
11. Total foodgrains		460721 (91.40)	492791 (93.51)	106.96
12. Mustard		3139 (0.62)	5367 (1.02)	170.98
13. Ground-nut		279 (0.06)	216 (0.04)	77.42
14. Potato		169 (0.03)	102 (0.02)	60.36
15. Sugarcane		1825 (0.36)	943 (0.18)	51.67
16. Tobacco		57 (0.00)	148 (0.03)	259.65
17. Total Commercial Crops		5469 (1.07)	6776 (1.29)	123.90
18. Other Crops		37885 (7.53)	27437 (5.21)	72.42
19. Gross cropped area		504075	527004	104.55

Note : Figures given in parentheses denote percentages to gross cropped area.

Source : Statistical Bulletin, Hamirpur, Office of the District Economics and Statistics Officer, Hamirpur.

The increase in area under foodgrains might be because of the intensified efforts of the government during Seventies to achieve self sufficiency in the production of foodgrains for catering to the needs of the growing population. The proportion of area under wheat crop increased from 25.79 per cent to 30.09 per cent during this period but the area under Jowar/Bajra put together with other cereals showed a marginal decrease from 20.53 per cent to 20.24 per cent and that of Gram from 34.54 per cent to 32.58 per cent. Moreover, the percentage of area under total pulses to gross cropped area slid down from 43.76 to 42.43 during this period. However, the proportion of area under commercial crops to gross cropped area showed an increase from 1.07 per cent in 1974-75 to 1.29 per cent during 1980-81, with an increase in additional area of 1407 hectares in absolute terms. Besides, the proportion of area under other crops like Sanai and fodders decreased from 7.35 per cent to 5.20 per cent during this period. On the other hand, we observe appreciable increase in the area of Moong, Mustard oil, Urd, Potato and Tobacco and considerable reduction in the areas of Arhar, Gram, Ground-nut and Sugar-cane. These changes have had the cumulative effect on the gross cropped area which showed an increase of 4.55 per cent during the period 1974-81.

Analysis of the cropping pattern available in different blocks as shown in Appendix-II, suggests that percentage of area under foodgrain crops to gross cropped area increased in almost all the blocks during the period 1974-81. However, its coverage in the year 1980-81 is found to be the highest (95.78 per cent) in Sumerpur block and the lowest (90.32 per cent) in Charkhari block. An increase in area under wheat cultivation is observed in each and every block, whereas the proportion of area under Gram cultivation has shown a general decline. It seems that some portion of area under Gram cultivation has been diverted towards wheat cultivation during this period.

Although the proportion of area under total pulses slid down during this period, its contribution to the gross cropped area is still substantial, with the highest (47.69 per cent) in Sarila block and the lowest (30.71 per cent) in Jaitpur block. No doubt, the proportion of area under total commercial crops showed an increasing trend during this period but the percentage of its coverage is found to be the highest (3.59 per cent) in Kurara block and the lowest (0.40 per cent) in Panwari block.

The block-wise percentages of area covered under Kharif, Rabi, Commercial and other crops are given in the following Table:

Table 4.5

Percentage of Area Covered Under Kharif, Rabi, Commercial Crops and Other Crops

Blocks	Kharif	Rabi	Commercial Crops	Other Crops
1. Sumerpur				
1974-75	19.99	75.56	0.72	3.73
1980-81	20.49	75.29	1.35	2.87
2. Kurara				
1974-75	19.45	74.15	2.28	4.12
1980-81	23.97	69.30	3.59	3.14
3. Sarila				
1974-75	25.80	63.22	1.22	9.76
1980-81	28.10	65.31	1.34	5.25
4. Gohand				
1974-75	17.80	73.13	0.68	8.39
1980-81	21.54	73.98	0.85	3.63
5. Rath				
1974-75	24.15	68.20	1.85	5.80
1980-81	23.12	70.90	1.33	4.65
6. Panwari				
1974-75	28.11	64.23	0.92	6.74
1980-81	27.69	66.51	0.40	5.40
7. Charkhari				
1974-75	20.70	68.85	0.57	9.88
1980-81	19.53	70.79	0.82	8.86
8. Muskara				
1974-75	26.05	68.66	0.92	4.37
1980-81	19.75	74.85	1.09	4.31
9. Maudaha				
1974-75	17.54	74.88	0.83	6.75
1980-81	15.92	78.71	1.60	3.77
10 Jaitpur				
1974-75	36.50	51.18	2.68	9.64
1980-81	32.87	57.68	1.45	8.00
11 Kabrai				
1974-75	22.23	66.73	0.78	10.26
1980-81	20.92	71.44	1.03	6.61
District				
1974-75	22.56	68.84	1.07	7.53
1980-81	22.11	71.40	1.29	5.20

Source : Statistical Bulletin, Hamirpur, Office of the District Economics and Statistics Officer, Hamirpur.

It transpires from the above table that the percentage of area covered under different crops in Kharif season remained almost constant in the district at 22 per cent during this period, whereas the corresponding coverage in respect of Rabi season showed a considerable increase from 68.84 per cent in 1974-75 to 71.40 per cent during 1980-81. But this coverage in respect of both Kharif and Rabi seasons showed wide variations from block to block. The blocks having the percentage of area covered during the Kharif season below the district average include Sumerpur, Gohand, Charkhari, Muskara and Maudaha, whereas the corresponding blocks in case of Rabi season comprised Jaitpur, Charkhari, Panwari, Rath, Sarila and Kurara. The area under commercial crops showed a general increase but its proportion to gross cropped area was the highest (3.59 per cent) in Kurara block and the lowest (0.40 per cent) in Panwari block. Moreover, the blocks of Sumerpur, Kurara, Sarila, Rath, Muskara, Maudaha, Jaitpur and Kabrai are found to be relatively better developed in the matter of commercial crops.

4.5 Productivity

As stated earlier, although the cultivated area per agricultural worker in the district is relatively high, the yield per hectare of important crops is found to be significantly low in Hamirpur district, as would be evident from the following Table:

Table 4.6

Average Yield of Important Crops

(Qntls. per ha.)

Crops	Hamirpur	Uttar Pradesh
1. Paddy	3.84	10.53
2. Jowar	5.16	5.99
3. Bajra	4.36	7.37
4. Urd	0.58	2.75
5. Moong	1.34	2.06
6. Wheat	12.77	16.50
7. Barley	9.56	13.25
8. Gram	6.56	8.61
9. Arhar	12.32	14.48
10. Mustard	3.48	5.40
11. Sugarcane	422.53	470.90
12. Potato	190.77	156.66

Source : Statistical Bulletin - Hamirpur, Office of the District Economics and Statistics Officer, Hamirpur.

The above table indicates that agricultural productivity of important crops in Hamirpur during 1980-81 was considerably low as compared to the corresponding yield rates of the State except the average yield of potato which is much higher (190.77 Qtls.) in the district than the State (i.e. 156.66 Qtls.).

The important among the factors chiefly responsible for low agricultural productivity in the district are low adoption of improved agricultural practices in terms of the use of fertiliser, and pesticides, besides inadequacy of irrigation facilities.

4.6 Agricultural Production

Agriculture because of being major source of livelihood for the people of the area obviously receives the highest priority in ongoing economic activities of the district. Since continuous efforts have been made in the past to achieve the objective of self sufficiency in foodgrains, it becomes relevant here to find out whether the district has become self sufficient in the foodgrain production or not. According to the following table, the total production of foodgrains in the district increased from 2396570 Qtls. in 1974-75 to 4232210 Qtls. during the year 1980-81. Hence after allowing margin of 10 per cent for seeds and storage losses etc., the availability of total foodgrains for the consumption of human population comes to 2156913 Qtls. in 1974-75 and 3808989 Qtls. during 1980-81. On the other hand, the total population of the district which was 9.88 lakh in 1971 increased to 11.94 lakh during 1981 resulting in decennial growth rate of 20.84 per cent. Using the data of population and production of foodgrains of Hamirpur district, the per capita availability of

Table 4.7

Production of Different Crops in Hamirpur

Crops	Production (Qtls.) during		(Quintal) Percentage increase/ decrease
	1974-75	1980-81	
1. Paddy	13070 (0.55)	15270 (0.36)	116.83
2. Wheat	888669 (37.08)	2024980 (47.85)	227.87
3. Other Cereals	568381 (23.72)	577630 (13.65)	101.63
4. Total Cereals	1470120 (61.34)	2617880 (61.86)	178.07
5. Arhar	188290 (7.86)	397560 (9.39)	211.14
6. Moong	80 (-)	820 (0.02)	1025.00
7. Gram	656470 (27.39)	1126270 (26.61)	171.56
8. Urd	13513 (0.56)	3090 (0.07)	22.87
9. Other Pulses	68097 (2.84)	86590 (2.05)	127.16
10. Total Pulses	926450 (38.66)	1614330 (38.14)	174.25
11. Total Food-grains	2396570 (100.0)	4232210 (100.0)	176.59
12. Mustard	8940	18680	208.95
13. Ground-nut	2360	1510	63.98
14. Sugarcane	478990	398450	83.19
15. Potato	17960	19460	108.35
16. Tobacco	583	1640	281.30
17. Other Crops	-	28060	-

Note : Figures given in parentheses denote percentages to totals.

Source: Statistical Bulletin - Hamirpur, Office of the District Economics and Statistics Officer, Hamirpur.

foodgrains per day for the population in 1974-75 comes to 770 Gm. as against the prescribed norm of 550 Gm. Whereas the corresponding per capita availability of foodgrains during the year 1980-81 works out to as high as 1120 Gm. This clearly shows that the district has become self sufficient in the production of foodgrains and its availability exceeds the requirement.

The block-wise production data of different crops which is placed at Appendix-III tell us that almost all the blocks in the district are producing surplus foodgrains, besides the highly significant contributions of Charkhari, Maudaha, Gohand and Kabrai in the total production of foodgrains.

4.7 High Yielding Varieties

The success of high yielding varieties programme largely depends upon the availability of irrigation facilities and other agricultural inputs. In case of Hamirpur district, irrigation is one of the major constraints and hence coverage of area under this programme seems to have been a remote possibility. In this connection, we observe that paddy and wheat are the two crops among the various high yielding varieties which could get their publicity in the district but to a limited extent only. The details of the area covered under high yielding varieties of paddy and wheat for different blocks are given in the following table:

Table 4.8

Block-wise Area Under High Yielding Varieties in Hamirpur

(Hectare)

Blocks	1976-77		1980-81	
	Total Area Paddy	Area HYV	Total area wheat	Area HYV
1. Sumerpur	32	-	22508	775 (3.44)
2. Kurara	327	313 (95.72)	7507	1500 (19.98)
3. Sarila	115	2 (1.74)	7541	1 (0.00)
4. Gohand	685	6 (0.88)	20744	220 (1.06)
5. Rath	1208	-	19990	371 (1.86)
6. Panwari	387	-	9588	22 (0.23)
7. Charkhari	288	-	15753	183 (1.16)
8. Muskara	83	-	11774	38 (0.32)
9. Maudaha	268	-	24447	69 (0.28)
10. Jaitpur	360	-	6550	1515 (24.05)
11. Kabrai	721	2 (0.28)	19156	794 (4.14)
District	4474	323 (7.22)	165558	5488 (3.31)
			5865	2233 (30.07)
			138681	14027 (10.11)

Note : Figures given in parentheses denote percentages to total cropped area of the respective crops.

Source : Statistical Bulletin Hamirpur, 1976-77 and 1980-81, Office of the District Economics and Statistical Officer, Hamirpur.

It would be evident from the above Table that the percentage of area covered under high yielding varieties of paddy to its total in Hamirpur district in 1976-77 was 7.20 which significantly increased to 30.07 during the year 1980-81, whereas the corresponding percentages in respect of wheat worked out to 3.31 and 10.11 respectively. Block-wise data pertaining to this aspect suggest that adoption of high yielding varieties of paddy, which was confined to Kurara, Sarila, Gohand and Kabrai blocks in 1976-77, extended to all the blocks during 1980-81. This adoption in respect of wheat was found in almost all the blocks excepting Sarila in 1976-77 but its coverage was quite high in Kurara and Jaitpur blocks. There appears to be some significant improvement in coverage of area under high yielding varieties of both paddy and wheat during 1980-81. In case of paddy, this coverage was the highest (71.41 per cent) in Gohand block and the lowest (4.39 per cent) Muskara block, whereas in case of wheat the corresponding percentages were 60.32 in Jaitpur and 4.36 in Charkhari block.

4.8 Consumption of Fertilizers

The consumption of fertilizer in Hamirpur district is comparatively low. Its use per ha. of cropped area in the district in terms of N, P and K during 1974-75 was 0.95 Kg., 0.47 Kg. and 0.05 Kg. respectively, whereas the corresponding use during 1980-81 increased to 3.96 Kg., 2.53 Kg. and 0.24 Kg., as shown below:

Table 4.9

Consumption of Fertilizer Per Hect. of Gross
Cropped Area in Hamirpur

(Per hect./Kg. consumption)

Blocks	Nitrogen		Phosphate		Potash		Total	
	1974-75	1980-81	1974-75	1980-81	1974-75	1980-81	1974-75	1980-81
0	1	2	3	4	5	6	7	8
1. Sumerpur	0.26	4.32	0.13	2.71	0.04	0.29	0.43	7.32
2. Kurara	3.42	7.26	1.62	4.68	0.09	0.58	5.13	13.50
3. Sarila	0.47	2.56	0.20	1.81	0.02	0.16	0.69	4.53
4. Gohand	1.97	4.74	0.30	2.38	0.03	0.19	2.30	7.31
5. Rath	3.66	13.07	1.58	6.75	0.19	0.30	5.43	20.12
6. Panwari	0.81	5.11	0.58	4.21	0.14	0.25	1.53	9.58
7. Charkheri	0.25	1.90	0.26	2.25	0.03	0.09	0.54	4.24
8. Muskara	0.21	3.44	0.20	2.17	0.00	0.08	0.41	5.69
9. Maudaha	0.20	2.02	0.18	1.28	0.02	0.25	0.40	3.55
10. Jaitpur	0.69	0.76	0.38	3.50	0.03	0.06	1.10	1.18
11. Kabrai	0.64	3.06	0.45	1.81	0.04	0.46	1.13	5.33
District	0.95	3.96	0.47	2.53	0.05	0.24	1.47	6.72

Source : Statistical Bulletin - Hamirpur, Office of the
District Economics and Statistics Officer,
Hamirpur.

Considering the use of N P and K together, we find that the consumption of fertilizer per ha. of cropped area, which was 1.47 Kg. in 1974-75, significantly increased to 6.72 Kg. during the year 1980-81, whereas the corresponding figures for Bundelkhand and whole of Uttar Pradesh were 11.80 Kg. and 47.35 Kg. respectively. Moreover, we notice wide variations in the use of fertilizers from one block to another. Its use is found to be the highest (20.12 Kg.) in Rath block and the lowest (1.18 Kg.) in Jaitpur block.

4.9 Agricultural Implements

The use of modern agricultural implements is needed to bring about quickness in work and carry out agricultural operations timely. In making use of agricultural implements, Hamirpur district is far behind the State level. The use of plough (Meston), tractor, seed drill and harrow per '00' hectares of net area sown in the district in 1978 was 1.29, .16, .04 and 0.14 respectively as against the corresponding figures of 20.3, 0.3, 0.1 and 0.9 in the State. The inter-tehsil variations in the use of modern agricultural implements are shown in the following table:

Table 4.10

Use of Agricultural Implements Per '00' ha. of Net Area Sown

Tehsils	Agricultural Implements (Number)			
	Meston	Tractor	Seed-drill	Harrow
1. Hamirpur	2.48	0.10	0.07	0.10
2. Rath	2.26	0.28	0.08	0.26
3. Charkhari	0.06	0.08	0.00	0.09
4. Maudaha	0.07	0.15	0.01	0.15
5. Mahoba	2.05	0.17	0.03	0.10
District	1.29	0.16	0.04	0.14

Source : Statistical Bulletin - Hamirpur, Office of the District Economics and Statistics Officer, Hamirpur.

According to the above table, the use of tractor is found to be the highest in Rath tehsil (0.28) and the lowest (0.08) in Charkhari tehsil. There were three tehsils namely Hamirpur, Charkhari and Maudaha where the use of tractor per '00' hectares is lower than the district level of 0.16. The use of seed drills per '00' hectares of net area sown is the highest (0.08) in Rath tehsil and the lowest (nil) in Charkhari tehsil. There were three tehsils viz. Charkhari, Maudaha and Mahoba where the number of seed drills used is found to be lower than the district level of 0.04.

Similarly, the number of harrows per '00' hectares of net area sown is the largest (0.26) in Kath tehsil and the lowest (0.09) in Charkhari. The number of harrows per '00' hectares of net area sown is lower in tehsils of Hamirpur, Charkhari and Mahoba than the district level of 0.14.

4.10 Seed and Fertilizer Stores, Cold Storage and Agro-Service Centres

Agricultural inputs like seed, fertilizer, pesticides, etc. are essentially required for adoption of modern agricultural practices. Judging from this angle, we observe that the number of seed and fertilizer stores in the district during 1981-82 was 46, out of which 24 were located in rural areas and the rest 22 were found in urban areas, as would be evident from the Table 4.11.

The total capacity of the above mentioned stores was 8873.6 metric tons, of which 4590 metric tons was available in rural areas and the remaining 4283.6 metric tons in urban areas. These stores are largely concentrated in Sumerpur, Panwari, Muskara, Maudaha and Jaitpur blocks, whereas Kabrai, Charkhari, Rath, Sarila and Kurara blocks have only one each of these stores.

Table 4.11

**Block-wise Seed and Fertilizer Stores, Cold Storages and
Agro-Service Centres during 1981-82**

Blocks	Seed Store and Fertilizer Stores		Pesticides depots.		Cold Storage		Agro-Service Centres		Gobar Gas Plants
	No.	Capacity M. Tonnes	No	Capacity M. Tonnes	No	Capacity M. Tonnes	Agro	Others	
0	1	2	3	4	5	6	7	8	9
1. Sumerpur	3	510	-	-	-	-	-	-	5
2. Kurara	1	200	-	-	-	-	-	-	19
3. Sarila	1	220	-	-	-	-	-	-	3
4. Gohand	2	440	-	-	-	-	-	-	9
5. Rath	1	220	-	-	-	-	-	-	3
6. Panwari	3	540	1	45.00	-	-	-	-	19
7. Charkhari	1	220	-	-	-	-	-	-	10
8. Luskara	4	640	1	39.00	-	-	2	-	17
9. Maucha	4	840	-	-	-	-	1	-	11
10. Jaitpur	3	540	1	45.00	-	-	1	-	6
11. Kabrai	1	220	-	-	-	-	-	-	9
Total Rural	24	4590	3	129.00	-	-	4	-	101
Total Urban	22	4283.6	8	610.00	1	560	24	1	-
District	46	8873.6	11	739.01	1	560	28	1	101

Source : Statistical Bulletin - Hamirpur, Office of the District Economics and Statistics Officer,
Hamirpur.

Moreover, there are, in all, 11 pesticides depots in the district, out of which 3 are located in rural areas and the rest 8 are found in urban areas. Blocks of Sumerpur, Kurara, Sarila, Gohand, Rath, Charkhari, Maudaha and Kabrai do not have pesticides depots at all. There is only one cold storage and that too is located at district headquarters only. Besides, there are 28 agro-service centres in the district, of these 24 are located in urban areas and only four are available in rural part of the district with their locations in Muskara, Maudaha and Jaitpur blocks only. As shown above, Gobar Gas plants are available in each of the blocks but they seem to be less publicised in Sumerpur, Sarila and Rath blocks.

Block-wise classification of villages according to their distances from seed-cum-fertilizer stores and agro-service centres is shown in the Table 4.12.

According to the table, there are only 24 villages which have got seed and fertilizer stores located within the village. There are 66 villages, farmers of which have to travel nearly 3 Kms. for procurement of agricultural inputs, whereas the farmers of the remaining 836 villages have to travel beyond 3 Kms. to avail this facility. Moreover, the facilities of agro-service centres are available in 4 villages only. Forty

Table 4.12

Classification of Villages According to Their Distances from Seed-cum-Fertilizer
Stores and Agro-Service Centres in Hamirpur During 1982

(Number)

Blocks	Seed-cum-Fertilizer Stores					Agro-Service Centres				
	On the village	Within the radius of 1 km.	1-3 kms.	3-5 kms.	5 kms and above	In the village of 1 Km.	1-3 kms.	3-5 kms.	5 kms. and above	
1	2	3	4	5	6	7	8	9	10	11
1. Sumerpur	3	3	1	13	65	-	4	-	-	81
2. Kurara	1	2	2	6	51	-	-	-	-	62
3. Sarila	1	1	-	3	61	-	-	-	-	66
4. Gohand	2	2	2	10	58	-	-	-	-	74
5. Rath	1	6	1	9	45	-	5	2	7	48
6. Panwari	3	3	14	21	65	-	-	-	-	106
7. Charkhari	1	-	1	8	102	-	4	1	-	107
8. Muskara	4	-	11	11	34	-	-	-	11	46
9. Maudaha	4	3	3	17	83	3	2	3	13	87
10. Jaitpur	3	-	3	7	79	-	-	1	6	84
11 Kabrai	1	3	5	6	82	1	10	13	10	64
District	24	23	43	111	725	4	25	20	52	825

Source : Statistical Bulletin - Hamirpur, Office of the District Economics and Statistics.
Officer, Hamirpur.

five villages get this facility within the radius of 3 Kms. but the rest 897 villages are located beyond 3 Kms. from the agro-service centres. Hence, we find that only small proportion of villages have got facilities of agricultural inputs within or nearby villages and farmers of the rest of the villages have to travel much to procure these agricultural inputs.

Chapter-V

IRRIGATION

The sources of irrigation available in Hamirpur district consist of both major and minor. Besides canal being the major source of irrigation, private minor irrigation works, which are being used for irrigation purposes, include tubewells, pumping sets, masonry wells with and without persian wheels. The block-wise length/number of existing irrigation sources of Hamirpur district for the years 1976-77 and 1981-82 are given in the Table 5.1.

As shown in Table No. 5.1, the total length of canals in the district increased from 591 Km. in 1976-77 to 908 Km. in 1981-82, showing the increase of 53.64 per cent. The growth of canal is found to be the highest (62.50 per cent) in Maudaha block and the lowest (15.00 per cent) in Muskara block.

There were only 53 State tubewells in the district in 1976-77 which increased to 228 during 1981-82, experiencing a growth of 330.19 per cent. In 1976-77, all these tubewells were concentrated in Sumerpur, Kurara, Sarila and Muskara blocks but Government tubewells were installed in two more blocks viz. Gohand (4) and Maudaha (24) during 1981-82. The private tubewells in the district in 1976-77 were 230 which increased to 905 during 1981-82. These private tubewells were largely concentrated in Sumerpur, and blocks of Panwari,

Table 5.1

Block-wise Sources of Irrigation in Hamirpur

(Length/Number)

Blocks	Canals Km.			Tubewells (State)			Tubewells (Private)			Pump sets		
	1976-77	1981-82	% growth	1976-77	1981-82	% growth	1976-77	1981-82	% growth	1976-77	1981-82	% growth
1. Sumerpur	25	40	60.00	16	80	400.00	81	277	241.97	127	237	86.61
2. Kurara	46	73	58.69	10	52	420.00	42	74	76.19	37	61	64.86
3. Sarila	46	73	58.69	26	63	142.31	1	5	400.00	185	370	100.00
4. Gohand	93	147	58.06	-	4	-	1	18	1700.00	268	856	219.40
5. Fath	73	116	58.90	-	-	-	44	3	93.18	415	768	85.06
6. Panwari	52	83	59.61	-	-	-	-	24	-	453	514	13.47
7. Charkhari	58	93	60.34	-	-	-	-	10	-	658	846	28.57
8. Muskara	60	69	15.00	1	5	-	12	13	8.33	198	278	40.40
9. Maudaha	40	65	62.50	-	24	-	49	475	869.39	309	362	23.62
10. Jaitpur	36	57	58.33	-	-	-	-	-	-	606	777	28.22
11. Kabrai	62	92	48.39	-	-	-	-	6	-	793	985	24.21
District	591	908	53.64	53	228	330.19	230	905	293.48	4049	6074	50.01

Contd....

Table 5.1 contd..

(Length/Number)

Blocks	Persian wheels		Masonry wells		Ponds		
	1976- 77	1981- 82 growth %	1976- 77	1981- 82 growth %	1976- 77	1981- 82 growth %	
1. Sumerpur	19	3	- 84.21	597	798	33.67	-
2. Kurara	6	-	-	266	177	-33.46	3
3. Sarila	2	1	- 50.00	194	427	120.10	2
4. Gohand	19	3	- 84.21	493	1114	125.96	-
5. Rath	22	12	- 45.45	414	1051	153.86	1
6. Panwari	74	56	- 24.32	1538	1500	- 2.47	1
7. Charkhari	27	64	137.04	1509	1690	11.99	4
8. Muskara	7	12	71.43	866	1288	48.73	1
9. Maudaha	12	7	- 41.67	921	1415	53.64	4
10 Jaitpur	238	106	- 55.46	2883	3491	21.09	3
11 Kabrai	64	13	- 79.69	2295	2331	1.57	5
District	490	227	- 53.67	11976	15284	27.62	24

Source : Statistical Bulletins - Hamirpur, Office of the District Economics and Statistics Officer, Hamirpur.

Charkhari, Jaitpur and Kabrai had no private tubewells at all in 1976-77. Maudaha block is found to have the largest number of private tubewells in 1981 while Rath block has the lowest number of these tubewells. Jaitpur is the only block which could not have any tubewells even upto 1981-82. Among the private sources of minor irrigation, there were 4049 pumping sets in the district in 1976-77 which increased to 6074 during 1981-82, showing the growth of 50.01 per cent during the period 1976-82. All the blocks of the district experienced positive growth in pump sets during the period 1976-82 but its growth was the highest (219.40 per cent) in Gohand block and the lowest (13.47 per cent) in Panwari block.

The number of masonry wells in the district in 1976-77 was 11976, out of which only 490 were fitted with persian wheels. Although the number of masonry wells increased to 15284 in 1981-82, the number of masonry wells fitted with persian wheels decreased to 227, experiencing the negative growth of 53.67 per cent during 1976-82. Rath block experienced highest positive growth of masonry wells (153.86 per cent), while Kurara block experienced highest negative growth of masonry wells (33.46 per cent) during the period 1976-82. In case of masonry wells fitted with persian wheels, almost all the blocks of the district experienced the negative growth except Charkhari and Muskara. The number of ponds, which was 24 in the district in 1976-77, did not show any change during 1981-82.

The area irrigated by different sources in the district during the period 1976-82 reveals that the area irrigated by tubewells (both State and Private) experienced the higher growth than that of canals and masonry wells.

The total irrigated area of the district in 1976-77 was 84,498 hectares which increased to 85,671 hectares during 1980-81, showing the growth of 1.39 per cent only. Sarila, Gohand, Rath, Panwari and Muskara blocks experienced a negative growth in irrigated area.

The contribution of canal to the total irrigated area of the district, which was the highest in 1976-77, decreased by 10.20 per cent during 1980-81. Almost all the blocks of the district excepting Charkhari, have experienced negative growth in the area irrigated by canal. The Maudaha block has the highest negative growth of 58.79 per cent while the Jaitpur has the lowest negative growth of 0.50 per cent, as would be evident from Table 5.2.

An interesting observation is that although the length of canal increased in each and every block during the period 1976-81, the area irrigated by canal instead of increasing slid down both at the aggregate level and in individual blocks except Charkhari. The contribution of tubewells to the total irrigated area of the district was 1.03 per cent in

Table 5.2

Block-wise Irrigated Area by Different Sources in Hamirpur

(Hectare,

Blocks	Canal			Tubewell			Well		
	1976-77	1980-81	% change	1976-77	1980-81	% change	1976-77	1980-81	% change
0	1	2	3	4	5	6	7	8	9
1. Sumerpur	1623 (73.31)	1391 (28.87)	- 14.29	105 (4.74)	3369 (69.92)	3108.57	9 (0.41)	28 (0.58)	211.11
2. Kurara	4232 (86.00)	4185 (75.54)	- 1.12	54 (1.09)	1340 (24.18)	2381.48	38 (0.77)	11 (0.20)	- 71.05
3. Sarila	5399 (78.42)	3377 (63.00)	- 37.45	714 (10.37)	1561 (29.12)	118.63	60 (0.87)	262 (4.89)	336.67
4. Johand	15808 (98.36)	14572 (95.59)	- 7.82	2 (0.01)	13 (0.08)	550	104 (0.65)	610 (4.00)	460.54
5. Rath	14441 (97.23)	14224 (96.47)	- 1.50	-	16 (0.11)	-	181 (1.22)	408 (2.76)	125.41
6. Panwari	8464 (87.37)	6945 (84.71)	- 17.95	-	-	-	861 (8.89)	977 (11.92)	13.47
7. Charkhari	5345 (74.59)	7088 (80.19)	32.61	-	-	-	885 (12.35)	1116 (12.62)	26.10
8. Muskara	6835 (88.80)	5410 (88.53)	- 20.85	-	175 (2.86)	-	298 (3.87)	287 (4.70)	-39.91
9. Maudaha	1269 (64.28)	523 (23.30)	- 58.79	-	1100 (49.00)	-	227 (11.50)	152 (6.77)	- 33.04
10 Jaitpur	3364 (47.53)	3347 (38.81)	- 0.50	-	-	-	3221 (45.51)	4999 (58.06)	55.20
11 Kabrai	3604 (60.53)	2141 (35.92)	- 40.59	-	16 (0.27)	-	1692 (28.42)	2924 (49.06)	72.81
District	70384 (83.30)	63203 (73.77)	- 10.20	875 (1.03)	7590 (8.86)	767.43	7576 (8.97)	11774 (13.74)	55.41

Table 5.2 contd..

(Hectare)

Blocks	Pond, Lake, Tank		% change	Others		% change	Total			
	1976-77	1980-81		1976-77	1980-81		1976-77	1980-81	1980-81	% change
0	10	11	12	13	14	15	16	17	18	
1. Sumerpur	-	2 (0.04)	-	477 (21.54)	28 (0.58)	-	94.13	2214	4818	117.62
2. Kurara	-	1 (0.02)	-	597 (12.13)	3 (0.05)	-	99.50	4921	5540	12.58
3. Sarila	-	7 (0.13)	-	712 (10.34)	153 (2.85)	-	78.51	6885	5360	-22.15
4. Gohand	2 (0.01)	-	-	155 (0.96)	49 (0.32)	-	68.39	16071	15244	- 5.15
5. Rath	3 (0.02)	-	-	227 (1.53)	97 (0.66)	-	57.27	14352	14745	- 0.72
6. Panwari	8 (0.08)	54 (0.66)	575.00	354 (3.65)	223 (2.71)	-	37.00	9687	8199	-15.36
7. Charkhari	66 (0.92)	62 (0.70)	-6.06	870 (12.14)	573 (6.48)	-	34.14	7166	8839	23.35
8. Muskara	-	72 (1.13)	-	564 (7.33)	167 (2.73)	-	70.39	7697	6111	-20.60
9. Meudane	-	3 (0.13)	-	478 (24.21)	462 (20.68)	-	3.35	1974	2245	13.73
10. Jaitpur	9 (0.13)	42 (0.49)	366.67	483 (6.82)	227 (2.64)	-	53.00	7077	8610	21.66
11. Kabrai	21 (0.35)	320 (5.37)	1423.81	637 (10.70)	559 (9.38)	-	12.24	5954	5960	0.10
District	109 (0.13)	563 (0.66)	416.51	554 (6.57)	2541 (2.96)	-	54.25	84498	85671	1.39

Note : Figures given in parentheses denote percentages to totals.

Source : Statistical Bulletin - Hamirpur, Office of the District Economics and Statistics Officer, Hamirpur.

1976-77, which increased to 8.86 per cent during 1980-81. Only four blocks namely, Sumerpur, Kurara, Sarila and Gohand had tubewells in 1976-77. But during the period 1976-81, tubewells were installed in four more blocks of Rath, Muskara, Maudaha and Kabrai. The irrigated area by masonry wells in the district also increased from 8.97 per cent in 1976-77 to 13.74 per cent during 1980-81. Kurara, Muskara and Maudaha had experienced negative growth in irrigated area by masonry wells while the highest positive growth (486.54 per cent) was observed in Gohand block and the lowest (26.10 per cent) in Charkhari block. The percentage share of pond, lake, tank etc. in total irrigated area of the district is found to be negligible.

It would be evident from the following table that the total irrigation potential created in the district in 1976-77 was about 1.22 lakh ha. which increased to about 1.80 lakh ha. during 1980-81, showing the growth of 47.54 per cent. On the other hand, utilisation of the total irrigation potential created during this period increased from about 84 thousand ha. to about 86 thousand ha., showing the growth of 2.38 per cent only.

Table 5.3

Extent of Utilization of Irrigation Potential
in the District

Particulars	(Ha.)			
	1976-77		1980-81	
	Irrigation Potential		Irrigation Potential	
	Created	Utilised	Created	Utilised
Major Irrigation Works	80920	70384 (86.98)	120960	63203 (52.35)
Minor Irrigation Works	40993	14114 (34.43)	58952	22468 (38.11)
Total	121913	84498 (69.31)	179912	85671 (47.62)

Source : Statistical Bulletin, Office of the Economics and Statistics Officer, Hamirpur.

Thus, the rate of increase in irrigation potential created is found to be much higher than the rate of its utilisation during the period 1976-81. This seems to be obviously true because the utilisation of irrigation potential in aggregative term, which was 69.31 per cent in the district in 1976-77, considerably decreased to 47.62 per cent during 1980-81. As shown above, the percentage utilisation of irrigation potential is much higher in major irrigation works as compared to the minor irrigation works in both the static years. But

this utilisation percentage in case of major irrigation works showed a significant decrease from 86.98 in 1976-77 to 52.35 during 1980-81, whereas the corresponding utilisation increased in case of minor irrigation works, from 34.43 per cent to 38.11 per cent.

It also transpires from the above table that under utilisation of the total irrigation potential created in the district increased from 30.69 per cent in 1976-77 to 52.38 per cent during 1980-81. Although the under utilisation of irrigation potential created is found to be much higher in minor irrigation works than that of major irrigation works, it has decreased in case of the former but has considerably increased in case of the latter. In sum, we observe that there has been a tremendous increase in irrigation potential in the district during this period, but because the rate of its utilisation has significantly gone down, the proportion of net irrigated area to net area sown has remained almost constant at around 17 per cent during the period 1976-81. Besides, the percentage of gross irrigated area to gross cropped area instead of increasing showed a marginal decline from 16.58 in 1976-77 to 16.43 during 1980-81. Thus, the low utilisation of irrigation potential appears to be one of the major constraints in development of agriculture.

The percentage of irrigated area to total area of all crops was 12.97 in 1976-77 which increased to 16.00 during 1980-81. The percentage increase in the irrigated area of Cereals and Commercial crops was by 7.42 points and 10.06 points respectively during 1976-77 and 1980-81 while the irrigated area of pulses and oil-seeds declined by 2.32 points and 16.75 points respectively during these static years as would be evident from the following table.

Table 5.4

Block-wise Irrigated Area under Different Crops in Hamirpur

1976-77

(Hectare)

Blocks	Cereals		Pulses		Oil-seeds		Commercial crops		Total
	Total area	Irrigated area	Total area	Irrigated area	Total area	Irrigated area	Total area	Irrigated area	Total Irrigated area
1	2	3	4	5	6	7	8	9	10
1. Sumerpur	33862	1227 (3.62)	34248	588 (1.72)	1880	27 (1.44)	328	1 (0.30)	70338 (2.62)
2. Kurara	15607	3487 (22.34)	16204	1082 (6.68)	961	112 (11.65)	205	8 (3.90)	32977 (14.22)
3. Sarila	18194	3332 (18.31)	21231	3793 (17.86)	2695	74 (2.74)	312	10 (3.20)	42432 (16.99)
4. Gohand	28725	7567 (26.34)	25365	4296 (16.61)	2072	120 (5.79)	335	39 (11.64)	56997 (21.09)
5. Rath	28032	6878 (24.54)	29981	7933 (26.46)	1148	33 (2.87)	599	380 (63.44)	59760 (25.47)
6. Panwari	20130	4340 (21.56)	14876	3764 (25.30)	1808	58 (3.21)	350	170 (48.57)	37164 (22.42)
7. Charkhari	28532	2810 (9.85)	25065	2747 (10.96)	4842	61 (1.26)	517	93 (17.99)	58956 (9.69)
8. Muskara	21455	3510 (16.35)	19600	3815 (19.46)	2127	96 (4.51)	385	27 (7.01)	43567 (17.09)
9. Maudana	36724	935 (2.55)	36180	814 (2.25)	3639	4 (0.11)	845	18 (2.13)	77388 (2.29)
10. Jaitpur	19535	3619 (18.53)	9362	2180 (23.28)	3877	59 (1.52)	479	387 (80.79)	33253 (18.78)
11. Kabrai	32626	2710 (8.31)	25098	1357 (5.41)	5361	21 (0.39)	441	153 (34.69)	63526 (6.68)
District	283442	40415 (14.26)	257710	32369 (12.56)	30410	665 (21.87)	4796	1286 (26.81)	576358 (12.97)

contd....

Table 5.4 contd..

1980-1981

Blocks	Cereals		Pulses		Oilseeds		Commercial crops		Total	
	Total area	Irrigated area	Total area	Irrigated area	Total area	Irrigated area	Total area	Irrigated area	Total area	Irrigated area
1. Sumerpur	25776	4285	23278	380	1758	247	227	4	51039	4916
	(16.62)			(1.63)		(14.05)		(1.76)		(9.63)
2. Kurara	15654	4790	13234	492	1834	408	100	1	30822	5691
	(30.60)			(3.72)		(22.25)		(1.00)		(18.46)
3. Sarila	20172	3014	21040	2062	2591	227	226	6	44029	5309
	(14.94)			(9.80)		(8.76)		(2.65)		(12.06)
4. Gohand	20561	8835	18763	5998	1471	223	190	55	40985	15111
	(42.97)			(31.97)		(15.16)		(28.95)		(36.87)
5. Rath	16062	7981	14371	5281	1203	48	479	349	32615	13659
	(49.69)			(35.51)		(3.99)		(72.86)		(41.88)
6. Panwari	21617	5535	15791	2440	1916	14	198	103	39522	8092
	(25.60)			(15.45)		(0.73)		(52.02)		(20.47)
7. Charkhari	33330	6352	26512	2050	5236	75	349	102	65427	8579
	(19.06)			(7.73)		(1.43)		(29.23)		(13.11)
8. Muskara	25553	3937	22820	1939	1840	118	308	65	50521	6059
	(15.41)			(8.50)		(6.41)		(21.10)		(11.99)
9. Maudaha	39138	1921	34058	183	3844	16	309	48	77349	2168
	(4.91)			(0.54)		(0.42)		(15.53)		(2.80)
10. Jaitpur	18826	7005	9661	1265	2367	32	325	286	31179	8588
	(37.21)			(13.09)		(1.35)		(82.00)		(27.54)
11. Kabrai	32492	4718	23582	799	3732	14	313	96	60119	5627
	(14.52)			(3.39)		(0.37)		(30.67)		(9.36)
District	269181	58373	223610	22889	27792	1422	3024	1115	523607	83799
	(21.68)			(10.24)		(5.12)		(36.87)		(16.00)

Note : Figures given in parentheses denote percentages to totals.

Source : Statistical Bulletin - Hamirpur, Office of the District Economics and Statistics Officer, Hamirpur.

Chapter-VI

ANIMAL HUSBANDRY AND FISHERIES

Animal husbandry is one of the important allied activities in rural areas which helps villagers supplement their family income. It is, however, contingent upon the livestock population which is available across the district in the State. The availability of livestock population per hectare of geographical area is a measure of agricultural input as animal power, availability of milch cattle for production of milk and also a source of raw material for tanning and leather industries.

6.1 Livestock Population

According to the Livestock Census of 1972, the total livestock population of the district was 9.34 lakh which increased to 9.89 lakh during 1978, showing the growth of 5.84 per cent during the period 1972-78, whereas the corresponding growth rate of livestock population in the State was 6.39 per cent during this period. The livestock population per hectare of geographical area available in the district in 1972 was 1.30 which increased to 1.38 during 1978. Although livestock population is widespread through out the district, it is largely concentrated in Rath, Kulpahar, Maudaha and Mahoba tehsils.

The proportion of milch animals (cows and she-baffaloes) to the total livestock population in the district in 1972 was 26.44 per cent which slided down to 24.90 per cent during 1978, as would be evident from the following table:

Table 6.1

Live-Stock Population in Hamirpur and Uttar Pradesh

Sl. No.	Particulars	Hamirpur		Uttar Pradesh	
		1972	1978	1972	1978
1. Cattle:					
i.	Males over 3 years	229247	229597	13694146	13633705
ii.	Females over 3 years	161994 (17.34)	159094 (16.09)	6744579 (13.71)	6650092 (12.70)
iii.	Young stock	141029	131962	5778566	5489538
	TOTAL	532270 (56.99)	520653 (52.66)	26217291 (53.29)	25773335 (49.24)
2. Buffaloes:					
i.	Males over 3 years	2379	2655	1626579	1839724
ii.	Females over 3 years	84993 (9.10)	87095 (8.81)	6585962 (13.39)	7287786 (13.92)
iii.	Young stock	55964	58059	4379819	4837241
	TOTAL	143336 (15.35)	147809 (14.95)	12592360 (25.59)	13964751 (26.68)
3. Sheep and Goat:					
		234548 (25.11)	287399 (29.07)	8565533 (17.41)	10521127 (20.10)
4. Other Livestock:					
		23891 (2.56)	32775 (3.32)	1823134 (3.71)	2084874 (3.98)
Total Livestock:					
		934045 (100.0)	988636 (100.0)	49198966 (100.0)	52344633 (100.0)
Poultry Birds:					
		54522	72715	3920293	5497520

Note : Figures in brackets indicate percentages to totals.

Source; Livestock Censuses, 1972 and 1978, Board of Revenue, Uttar Pradesh, Lucknow.

On the other hand, the corresponding proportion of milch animals at the State level also declined from 27.10 per cent in 1972 to 26.62 per cent during 1978. Among the milch animals, the proportion of cows works out to be higher than she-buffaloes in the district in both the Censuses. But in case of the State, although the similar trend is perceptible in 1972, the position is reversed in 1978 with higher proportion of she-buffaloes than the cows.

The total strength of sheep and goat, which was slightly higher than 25 per cent in the district in 1972, significantly increased to 29.07 per cent during 1978, whereas the corresponding percentages at the State level worked out to 17.41 and 20.10 respectively. Thus, the position of the district in regard to the availability of sheep and goat is found to be much better as compared to the State. The proportionately higher concentration of sheep and goat in Hamirpur district is probably due to better availability of shrubs and other grazing facilities, besides suitable climatic conditions. The statistics on the quality of cattle breed is hardly available in general and in Bundelkhand region in particular. However, as general observation is that the quality of livestock in the district is poor and majority of the milch cattle are of indigeneous breed. The average milk yield per she-buffaloe per day is reported to be 1.01 litres in the district, whereas the corresponding estimate of milk yield at the State level works out to 2.90 litres.

The total poultry birds available in the district were 55 thousand in 1972 which significantly increased to nearly 73 thousand during 1978, showing the growth of 33.37 per cent, whereas the corresponding growth of poultry birds in the State was 40.23 per cent during this period.

6.2 Veterinary Institutions

To provide health cover to the existing livestock population, there were 17 Veterinary hospitals, 9 artificial insemination centres/sub-centres and 14 stockman centres in the district in 1974-75 which during the year 1981-82 increased to 19, 26, 25 respectively. The number of artificial insemination centres increased three times and those of stock-man centres twice during this period, which is discernible from the following table:

Table 6.2

Veterinary Institutions in Hamirpur District

Veterinary Institutions	1974-75 (Number)	1981-82 (Number)	Percentage increase in 1981- 82 over 1974-75
1. Veterinary Hospitals	17	19	111.76
2. Artificial Insemination Centre/Sub-Centre	9	26	288.89
3. Stock-man Centre	14	25	178.57

Source : Statistical Bulletin - Hamirpur, 1974 and 1982,
Office of the District Economics and Statistics
Officer, Hamirpur.

Besides, there were two sheep/goat development centres and one piggery development centre in the district. The breedable bovine population per veterinary hospital in the district which was 14529 in 1974-75 decreased to 12957 during 1981-82, whereas the corresponding numbers at the State level worked out as 44403 and 45086 respectively. Similarly, the figures of milch cattle population per A.I.C/Sub-Centre and per Stock-man Centre were 27443 and 17642 in 1974-75 which decreased to 9469 and 9848 respectively in 1981-82. In spite of appreciable increase in different types of veterinary institutions during Seventies, their existing strength still fall short off the norms prescribed under Intensive Cattle Development Project (ICDP). (5000 milch animals per veterinary hospital and 1000 milch animals per stockman centre).

Inter-block variations in veterinary institutions during 1981-82 are shown in the following table:

Table 6.3

Block-wise Veterinary Institutions in Hamirpur
in 1981-82

Blocks	(Number)				
	Veterinary hospitals	Stockman Centres	Artificial Insemination Centres/Sub-Centres	Piggery Units	Poultry Units
1. Sumerpur	2	3	3	24	11
2. Kurara	1	2	2	25	10
3. Sarila	1	2	1	-	-
4. Gohand	1	2	2	77	88
5. Rath	3	2	3	58	58
6. Panwari	2	2	3	44	33
7. Charkhari	1	3	2	149	143
8. Muskara	2	3	4	15	13
9. Maudaha	1	2	2	131	351
10. Jaitpur	3	1	2	13	50
11. Kabrai	2	3	2	49	3
District	19	25	26	585	760

Source : Statistical Bulletin, Hamirpur, 1982, Office of the District Economics and Statistics Officer, Hamirpur.

It would be evident from the above table that Veterinary Institutions are generally located in each and every block. Sarila and Kabrai are the two blocks which appear to be deficient in veterinary institutions. There are 2 sheep/goat development centres, one is located at Jaitpur and the other is found at district headquarters. Piggery development centres are not available in any of the block. Piggery and Poultry units are dispersed through out the district except Sarila block where none of these units are found.

6.3 Fisheries

The total water area under pisciculture in the district during 1980-81 was 5679 ha. concentrated in four blocks of Panwari, Charkhari, Jaitpur and Kabrai only. Among these four blocks, Kabrai had the highest percentage (45.23) of this area while the corresponding percentage was found to be the lowest (5.43 per cent) in Panwari block as shown in table 6.4.

As the table shows, out of the total 997 thousand finger-lings distributed in the district, Charkhari block received the largest share (53.66 per cent), while the Panwari received the lowest (2.71 per cent). The contribution to the fish production was the highest (54.21 per cent) by Kabrai block and the lowest (5.92 per cent) by Panwari block. The per hectare production of fish in the district comes to 0.77 quintals.

Table 6.4

Block-wise Area Under Pisciculture, Distribution of Figure-lings, Production and Number of Co-operative Societies

Block	Area under Pisciculture	Distribution Figure-lings (No.) '000'	Production of fish (Qntls.)	Co-operative Societies (No.)
1. Panwari	308 (5.43)	27 (2.71)	26 (5.92)	-
2. Charkhari	1960 (34.51)	535 (53.66)	140 (31.89)	3
3. Jaitpur	842 (14.83)	63 (6.32)	35 (7.97)	1
4. Kabrai	2569 (45.23)	372 (37.31)	238 (54.22)	1
District	5679	997	439	5

Source : Statistical Bulletin, 1982 : Office of the District Economics and Statistics Officer, Hamirpur.

Out of the existing five Co-operative Societies in the district, three are located in Charkhari block, while of the remaining two, one is in Jaitpur and the other in Kabrai.

Chapter-VII

INDUSTRY

Industrialisation plays the crucial role in increasing both income and employment. Hamirpur is one of the industrially backward districts of the State. The contribution of primary sector to the total net domestic product in the district in 1970-71 was 96.39 per cent which was higher than that of Bundelkhand region, i.e. 93.05 per cent, as would be evident from the following table:

Table 7.1

Sectoral Contributions to Total Net Domestic Products

(Percentage)

Sectors	Hamirpur		Bundelkhand Region	
	1970-71	1980-81	1970-71	1980-81
1. Primary	96.39	91.17	93.05	89.62
2. Secondary	3.61	8.83	6.95	10.32
TOTAL	100.00	100.00	100.00	100.00

Source : District Domestic Net Output - Uttar Pradesh, Economics And Statistics Division, State Planning Institute, Lucknow.

After lapse of a decade although the contribution of primary sector to the total net domestic product in the district during 1980-81 decreased to 91.17 per cent, it was still higher than the regional level, i.e., 89.62 per cent.

On the other hand, the contribution of manufacturing sector to the total net domestic product, which was 3.61 per cent in the district in 1970-71, increased to 8.83 per cent during the year 1980-81. Whereas the corresponding percentages at the regional level were calculated at 6.95 per cent and 10.38 per cent respectively. Thus, the situation of industrial development at the regional level seems to be much better than that of Hamirpur district.

Turning to the aspect of employment, we observe that the share of workers engaged in agriculture to the total workers was 84.81 per cent in the district in 1971 which decreased to 81.79 per cent during the year 1981, whereas the corresponding share of workers engaged in non-agricultural sector showed a simultaneous increase from 15.19 per cent in 1971 to 18.21 per cent during the year 1981. Almost a similar trend is perceptible at the regional level. There was a decline in share of workers engaged in agriculture to total workers from 81.13 per cent in 1971 to 78.45 per cent during 1981, whereas the corresponding share of non-agricultural workers increased from 18.87 per cent to 21.55 per cent during this period. Thus, the contribution of manufacturing sector in terms of income and employment is found to be comparatively lower in the district which in turn, confirms the slow pace of industrialisation.

7.1 Industrial Units

Upto the year 1979-80, there was only one industrial unit in the district registered under Factory Act, 1948, with total employment of 65 persons and annual production of Rs.1.61 lakh. Besides, there were, in all, 164 small scale industrial units in the district, registered with Directorate of Industries, Kanpur. The total employment provided by these units is estimated to be 885 workers. Moreover, there were about 2417 un-registered cottage and village industries in the district during 1979-80, providing total employment to 4427 persons. The block-wise details of registered and unregistered industrial units alongwith the employment are given in Table 7.2.

As would be evident from the table, the small scale industrial units registered with Directorate of Industries, Kanpur are found to be located mainly in Sumerpur, Maudaha, Jaitpur, Kabrai and Kurara blocks. Out of these total industrial units, 23 are located in rural part of the district and the rest 141 industrial units are found in urban part. The blocks of Sarila, Gohand, Kath, Panwari, Charkhari and Muskara do not have any registered industrial units at all. On the other hand, the unregistered cottage and village industries are found to be widely scattered in different blocks of the district. However, a relatively larger concentration of these industrial units is found to be in Sumerpur, Gohand, Muskara and Panwari blocks.

Table 7.2

**Block-wise Number of Industrial Units and Employment
During 1979-80**

Blocks	Small Scale Industrial Units registered with Directorate of Indus- tries		Un-registered Industrial Units	
	Number	Employment	Number	Employment
1. Sumerpur	8	40	531	1034
2. Kurara	2	10	41	98
3. Sarila	-	-	36	144
4. Gohand	-	-	460	1224
5. Rath	-	-	59	83
6. Panwari	-	-	294	420
7. Charkhari	-	-	104	107
8. Muskara	-	-	407	422
9. Maudaha	3	15	118	130
10 Jaitpur	5	25	142	371
11 Kabrai	5	25	98	186
Total Rural	23	115	2296	4228
Total Urban	141	770	121	199
District	164	885	2417	4427

Source : Statistical Bulletin - Hamirpur, Office of the
District Economics and Statistics Officer,
Hamirpur.

7.2 Handlooms

Hand-looms is important household industry of the district. There were, in all, 1314 hand-looms in the district in 1973 which increased to 1336 during 1976-77. Most of these handlooms were reported to be operating under the Co-operative Societies. To organise and for better functioning of these handlooms, one weavers Co-operative Society was formed in 1976-77. The total production of hand-loom cloth in the district during 1976-77 was 16.20 lakh meters.

7.3 Industrial Estate

There is only one industrial estate in the district for catering to the needs of the entrepreneurs to set up industrial units. So far 8 sheds have been allotted to the entrepreneurs who have set-up industries of their choice. All of them are reported to be functioning. Besides, 3 plots have been allotted to the entrepreneurs for construction of their own sheds to establish the industrial units. But none of them have, so far, constructed these sheds. The number of persons employed in different types of industrial units functioning in the industrial estate is 20 only and the total production is worth Rs.50,000 annually. The details of the progress made in industrial estate for the period of three years are given below:

Table 7.3

Progress of the Industrial Estate in Hamirpur

Particulars	1979-80	1980-81	1981-82
1. Number of industrial estate	1	1	1
2. Number of sheds:			
(a) Distributed	8	8	8
(b) Functioning	8	8	8
3. Number of plots:			
(a) Distributed	-	2	3
(b) Functioning	-	-	-
4. Persons employed	15	20	20
5. Production ('000' Rs.)	50	50	50

Source : Statistical Bulletin - Hamirpur, Office of the District Economics and Statistics Officer, Hamirpur.

Chapter-VIII

ECONOMIC AND SOCIAL INFRASTRUCTURE

Infrastructure plays a catalytic role in the process of development. It is generally defined as comprising the basic services and public utilities essential to the productive sectors of the economy. It is also termed as social overhead capital which is invested before an economy takes off into sustained growth. The two major components of the infrastructure are economic and social. The former comprises road, power, transport and banking, whereas the latter includes education, medical services, drinking water facility etc. Both components are cause as well as effect of economic advancement. Here we intend to assess and analyse the level of development in socio-economic infra-structure of Hamirpur district with major focus on its spatial distribution at the block level. The components selected for this purpose relate to road, electricity/power, banking, education, medical and health services, drinking water etc.

8.1 Roads

The district is found to be deficient in the matter of road development. The length of pucca roads per '000' Sq.Km. of area in the district in 1974-75 was 78 Kms., which increased to 114 Kms. during the year 1980-81. Whereas the corresponding length of pucca roads at the State level worked out to 130 and 210 Kms. respectively. On the other hand, consider-

ing population as the denominator, we observe that length of pucca roads per lakh of population in the district in 1974-75 was 57 Kms., which increased to about 69 Kms. during the year 1980-81, whereas the corresponding figures at the State level worked out to be 43 Kms. and 58 Kms. respectively. Thus, when area is taken as denominator, the district really seems to be deficient in road infra-structure. However, once the denominator is changed to population, the position of the district reverses and it becomes better off as compared to the State. These two opposing tendencies make it difficult to arrive at some definite conclusion. Therefore, distance criterion is applied to assess the relative position of the district in this regard. Accordingly, we observe that the percentage of villages falling within the radius of 3 Kms. from pucca roads in the district during 1980-81 was 33.98 which is much lower than the corresponding percentage of 46.82 at the State level, providing clear cut indications of the district really being deficient in road infra-structure.

There seems to be wide variations in the availability of road infra-structure among different blocks of the district, as would be evident from the following table.

Table 8.1

Block-wise Length of Pucca Roads

(Kms.)

Blocks	Total length of roads		Length of roads per '000' Sq.Km. of area		Length of roads per lakh of population	
	1974-75	1980-81	1974-75	1980-81	1974-75	1980-81
	2	3	4	5	6	7
1. Sumerpur	86.00	81.00	137.0	129.4	91.1	71.00
2. Kurara	22.00	72.00	49.0	162.2	31.4	107.8
3. Sarila	18.00	37.5	27.0	57.7	18.1	45.1
4. Gohand	46.00	88.0	86.0	165.7	63.3	100.12
5. Rath	29.00	44.0	65.0	99.3	28.6	61.2
6. Panwari	39.00	43.5	72.0	81.0	52.5	48.5
7. Charkhari	63.00	72.5	68.0	79.2	67.9	71.4
8. Muskara	81.00	122.8	143.0	194.3	94.1	117.2
9. Maudaha	75.00	94.0	75.0	100.3	63.1	80.0
10 Jaitpur	31.00	38.2	58.0	71.4	46.6	47.5
11 Kabrai	77.00	119.0	84.0	129.9	76.0	97.2
DISTRICT	567	819.3	78.0	114.3	57.4	68.6

Source : Statistical Bulletin - Hamirpur, Office of
of the District Economics and Statistics
Officer, Hamirpur.

The length of pucca roads per '000' Sq. Km. of area available in the district in 1974-75 was 78 Kms., with maximum (143 Kms.) in Muskara block and minimum (27 Kms.) in Sarila block. The general improvement in the road net work of individual blocks is quite perceptible during the period 1974-81, but ranking of blocks does not show any significant change over the period. A similar kind of trend emerges when intra-block variations in road net work are analysed by taking population as denominator.

From the point of view of accessibility, we observe that 30 per cent of the total villages in the district in 1974-75 were falling within the radius of 3 Kms. from pucca roads with maximum (46.67, in Muskara block and minimum (13.64) in Sarila block, as would be evident from the Table 8.2.

There seems to be a significant improvement in road network in the district during Seventies. The proportion of villages falling within the radius of 3 Kms. from pucca roads increased to 39.42 per cent in 1980-81 with maximum (63.51 per cent) in Gohand block and minimum (25.76 per cent) in Sarila block, besides the general improvement that we notice in individual blocks. This improvement in accessibility of villages to pucca roads seems to be an outcome of the efforts which were intensified in Seventies for construction of link roads under the National Programme of Minimum Needs.

Table 8.2

Classification of Villages According to Their Distances
from Pucca Roads

Blocks	1974-75		1981-82	
	Within the radius of 3 Kms.	Beyond 3 Kms. radius	Within the radius of 3 Kms.	Beyond 3 Kms. radius
1	2	3	4	5
1. Sumerpur	38 (44.71)	47 (55.29)	40 (47.06)	45 (52.94)
2. Kurara	11 (17.46)	52 (82.54)	25 (40.32)	37 (59.68)
3. Sarila	9 (13.64)	57 (86.36)	17 (25.76)	49 (74.24)
4. Gohand	28 (37.84)	46 (62.16)	47 (63.51)	27 (36.49)
5. Rath	17 (27.42)	45 (72.58)	27 (43.55)	35 (56.45)
6. Panwari	27 (38.18)	79 (65.82)	34 (32.08)	72 (67.92)
7. Charkhari	21 (18.58)	92 (81.42)	30 (26.79)	82 (73.21)
8. Muskara	28 (46.67)	32 (53.33)	30 (50.00)	30 (50.00)
9. Maudaha	38 (33.93)	74 (66.07)	44 (40.00)	66 (60.00)
10 Jaitpur	27 (29.35)	65 (70.65)	31 (33.70)	61 (66.30)
11 Kabrai	35 (36.08)	62 (63.92)	40 (41.24)	57 (59.76)
DISTRICT	279 (30.00)	651 (70.00)	365 (39.42)	561 (60.58)

Note : Figures given in parentheses denote percentages to total villages.

Source : Statistical Bulletin - Hamirpur, Office of the District Economics and Statistics Officer, Hamirpur.

8.2 Electricity/Power

The electricity/power is one of the important component of economic infra-structure which has to play the crucial role in the development of both agriculture and industry. Hamirpur is one of the backward districts with regard to power development also. The percentage of villages electrified to the total number of villages, which was 15 in the district in 1974-75, increased to 29 during 1981-82, as would be evident from the following table:

Table 8.3

Block-wise Percentage of villages electrified to
total villages

			(Percentage)
Blocks	1974-75	1981-82	Percentage increase in 1981-82 over 1974-75
1. Sumerpur	26	73	282
2. Kurara	24	62	253
3. Sarila	17	36	218
4. Gohand	16	19	117
5. Rath	7	16	250
6. Panwari	9	16	170
7. Char-khari	9	11	120
8. Muskara	25	28	113
9. Maudaha	19	30	157
10 Jaitpur	8	13	171
11 Kabrai	16	32	194
DISTRICT	15	29	194

Source : Statistical Bulletin - Hamirpur,
Office of the District Economics and
Statistics Officer, Hamirpur.

On the other hand, the corresponding percentage in the State during 1981-82 was significantly higher (34.31). The position regarding the electrification of villages varies from one block to another. The percentage of villages electrified to the total villages in the year 1974-75 was highest (26) in Sumerpur block and lowest (7) in Rath block, whereas the corresponding percentages during the year 1981-82 were (73) in Sumerpur and (11) in Charkhari. The growth rate of electrified villages during this period was the highest (282) in Sumerpur and the lowest (113) in Muskara block as against the district average of 194 per cent. Besides, there were, in all, 12 electrified towns and 130 Harijan Basties. On the whole, we observe that the blocks of Charkhari, Jaitpur, Rath and Panwari are still deficient in rural electrification.

Regarding the use of electricity for different purposes, we find that the per capita consumption of electricity in the district was 24.71 KWH as against the corresponding figure of 87 KWH at the State level. Of the total electricity consumed in the district, a slightly higher than 75 per cent was used for irrigation and de-watering. About 16 per cent was utilised for domestic purposes. The remaining 9 per cent was utilised for industrial and commercial purposes including public lightings and railways.

8.3 Financial Institutions

The total number of commercial banks in the district during 1982 was 31. The largest number of these bank branches were in Muskara block while blocks of Kurara, Sarila, Gohand, Rath and Charkhari had no such branches at all. Out of the total bank branches, 20 were located in the urban parts of the district and only 11 branches were spread in rural areas of the district. This implies that banking facilities are still lop-sided and mainly concentrated in urban areas.

The population per bank branch was higher in Panwari (i.e. 74244) and Jaitpur (i.e. 33291) as compared to the district average of 31378. The details of number of bank branches, population per bank branch and classification of villages according to their distances from bank branches are shown in the Table 8.4.

The table shows that the number of villages situated at a distance of '5 Kms. and above' from the bank branches was 765 which formed 82.61 per cent of the total inhabited villages in the district. The number of villages having Commercial and Co-operative banks within the village was 14 as against 25 villages within the radius of 1 Km., 31 villages within the radius of '1 and 3 Kms. and 91 villages in between 3 and 5 Kms.

Table 8.4

**Block-wise Classification of Villages According to
Their Distances from Bank Branches**

Blocks	Total Bank Branches (No)	Population per bank branch	(Number)				
			Classification of villages according to their distances from bank branches				
			In the village	Less than 1 Km.	1-3 Kms.	3-5 Kms.	5 Kms. and above
1	2	3	4	5	6	7	8
1. Sumerpur	2	23,594	2	1	5	-	77
2. Kurara	-	-	-	5	2	15	40
3. Sarila	-	-	-	1	-	-	65
4. Gohand	-	-	-	2	3	4	65
5. Rath	-	-	-	5	1	6	50
6. Panwari	1	74,244	2	3	4	4	93
7. Charkhari	-	-	-	2	5	6	99
8. Muskara	3	21,529	4	-	1	17	38
9. Maudaha	2	29,711	2	3	6	24	75
10. Jaitpur	2	33,291	3	-	-	6	83
11. Kabrai	1	20,262	1	3	4	9	80
Total Rural	11	80,933	14	25	31	91	765
Total Urban	20	4,898	-	-	-	-	-
DISTRICT	31	31,878	14	25	31	91	765

Source : Statistical Bulletin - Hamirpur, Office
of the District Economics and Statistics
Officer, Hamirpur.

The total deposit of these bank branches in the district increased from Rs.97,992 thousand in 1979-80 to Rs.1,77,703 thousand in 1981-82, showing the growth rate of 81.34 per cent. The total advances also increased from Rs.26332 thousand in 1979-80 to Rs.73133 thousand in 1981-82, showing the growth of 177.73 per cent during this period. Thus, the percentage increase during the period 1979-82 was higher in respect of total advances as compared to the total deposit but still the credit-deposit ratio in the district was lower (20.79 per cent) than the State average of 43.89 per cent. The share of priority sector in the total advances increased to 95 per cent in 1981-82 from 79 per cent in 1979-80. The details of deposits and advances are given in Table 8.5.

8.4 Co-operatives

There were 107 primary agricultural co-operative societies in the district in 1982 with total membership of 103686. The number of these societies was highest in Panwari and the lowest in Kurara block. The share capital was Rs.9932 thousand and working capital Rs.58351 thousand. The total loan advanced was Rs.32132 thousand, in which the share of short-term loan was 71.07 per cent as against medium term loan (11.25 per cent) and long-term loan (17.68 per cent). The loan advanced by primary agricultural Co-operative Societies per borrower in

Table 8.5

Progress of Commercial Banks in Hamirpur District

Particulars	('000' Rs.)		
	1979-80	1980-81	1981-82
1. Total Deposits	97992	148494	177703
2. Total loan distributed	26332	54135	73133
3. Share of primary sector	20875	43262	69466
(i) Agriculture	16525	31048	49476
(ii) Small Industries	312	2136	2051
(iii) Retail trade	1623	5862	7277
(iv) Road transport	2205	3531	4866
(v) Others	210	685	5796
4. Share of primary sector in total advances (Percentage)	79.00	80.00	95.00
5. Per capita deposit	0.084	0.124	0.149
6. Per capita advances	0.022	0.045	0.061
7. Per capita advances to primary sector	0.018	0.036	0.058

Source : Statistical Bulletin - Hamirpur, Office of the District Economics and Statistics Officer, Hamirpur.

the district was Rs.309.90 which was quite low as compared to Rs.626 per borrower at the State level. Block-wise details of primary agricultural co-operative societies in Hamirpur district are shown in Table 8.6.

The district had 13 district co-operative banks in 1981-82. The total loans advanced by these banks increased from Rs.18668 thousand in 1979-80 to Rs.22046 thousand in 1981-82 but the number of Land Development Banks remained the constant. There were 4 Land Development Banks in the district in 1979-80 and their number remained the same upto 1982. The loan advanced also decreased from Rs.8691 thousand in 1979-80 to Rs.5674 thousand in 1981-82.

The position of primary non-agricultural co-operative societies has also been stagnant. There were 11 Co-operative Societies of this type in 1979-80 and their number remained unchanged upto 1982. Even the membership, share capital and working capital remained unchanged upto 1981-82 as would be evident from Table 8.7. The other co-operative societies were very few and unevenly located in the district. There were only seven primary marketing societies in the district in 1982 and these were concentrated in Sumerpur, Kurara, Rath, Charkhari, Maudaha and Kabrai blocks only. The Joint Agricultural Co-operative Societies were 12 in the district which were mainly located in Kurara, Rath, Charkhari, Maudaha and Kabrai blocks.

Table 8.6

Block-wise Primary Agricultural Co-operative Societies in Hamirpur During 1982

('000' Rs.)

Blocks	Agricultural Co-operative Societies (Number)	Member- ship (Number)	Share capital	Working capital	Total deposits	Loan distributed		
						Short term	Medium term	Long term
1. Sumerpur	8	13024	1217	5672	229	2541	211	995
2. Kurara	6	5375	459	3874	71	937	503	79
3. Sarila	10	7460	677	4841	55	1948	80	294
4. Gohand	5	7587	987	3951	122	2760	289	489
5. Rath	7	5628	401	2311	89	717	38	462
6. Panwari	19	8806	128	4561	121	1608	223	142
7. Charkhari	12	12736	1217	7259	82	2750	610	523
8. Muskara	7	8621	703	4287	148	2026	201	329
9. Maudaha	11	12162	1376	5801	265	2575	265	1238
10. Jaitpur	9	8323	678	5242	126	1878	247	15
11. Kabrai	13	13944	1489	10546	179	3101	952	1108
DISTRICT	107	103686	9932	58351	1487	22841	3617	5674

Source : Statistical Bulletin - Hamirpur, Office of the District Economics and
Statistics Officer, Hamirpur.

Table 8.7

Co-operative Banks and Primary Non-Agricultural
Co-operative Societies in Hamirpur

Particulars	1979-80	1980-81	1981-82
<u>1. District Co-operative Banks</u>			
(a) Branches (Number)	13	13	13
(b) Loan distributed '000'Rs.	19766	20552	24075
(i) Short-term '000' Rs.	18668	19663	22046
(ii) Medium-term '000'Rs.	1098	889	2029
<u>2. Land Development Banks</u>			
(a) Branches (Number)	4	4	4
(b) Loan distributed '000'Rs.	3691	5424	5674
<u>3. Primary Non-Agricultural Co-operative Societies</u>			
(a) Branches (Number)	11	11	11
(b) Share capital '000' Rs.	50	50	50
(c) Working capital '000' Rs.	156	156	156

Source : Statistical Bulletin - Hamirpur,
Office of the District Economics and
Statistics Officer, Hamirpur.

8.5 Education

Educational institutions which consisted of 1041 Junior Basic Schools, 105 Senior Basic Schools, 27 Higher Secondary and One Degree College in the district in 1974-75, increased to 1063, 169, 33 and 3 respectively during the year 1981-82, as would be evident from the following table:

Table 8.8

Educational Institutions in Hamirpur

Educational Institutions	1974-75	1981-82	Percentage growth
1. Junior Basic Schools	1041	1063	102.11
2. Senior Basic Schools	105	169	160.95
3. Higher Secondary Schools	27	33	122.22
4. Degree Colleges	1	3	300.00

Source : Statistical Bulletin - Hamirpur,
Office of the District Economics and
Statistics Officer, Hamirpur.

It would be evident from the above table that the growth of Senior Basic Schools, Higher Secondary Schools and Degree Colleges during this period was much higher as compared to that of Junior Basic Schools. The growth of these educational institutions seems to be the need base which appears to be sensible obviously because of the craze for higher education recently developed among the villagers.

An analysis of the spatial distribution of the existing educational institutions in the district during 1981-82 reveals that out of the total 926 villages in the district, 763 villages (nearly 82 percent) were located within the radius of 3 Kms. from Junior Basic Schools, as would be evident from the following table:

Table 8.9

Classification of Villages According to Their Distance
from Educational Institutions

Blocks	Villages within the radius of 3 Kms. from:				
	Junior Basic Schools	Senior Basic Schools	Boys	Girls	Higher Secondary Schools
					Boys Girls
1. Sumerpur	80 (94.11)	24 (28.24)	11 (12.94)	3 (3.53)	-
2. Kurara	51 (82.26)	19 (30.65)	10 (16.13)	5 (8.06)	2 (3.22)
3. Sarila	53 (80.30)	23 (34.85)	5 (7.58)	1 (1.52)	-
4. Gohand	68 (91.89)	26 (35.14)	10 (13.51)	5 (6.76)	-
5. Rath	52 (83.87)	14 (22.58)	9 (14.52)	8 (12.90)	5 (8.06)
6. Panwari	90 (84.91)	32 (30.19)	19 (17.92)	19 (17.92)	6 (5.66)
7. Charkhari	84 (75.00)	19 (16.96)	15 (13.39)	9 (8.04)	5 (4.46)
8. Muskara	57 (95.00)	12 (20.00)	9 (15.00)	7 (11.67)	-
9. Maudaha	70 (63.64)	38 (34.55)	16 (14.55)	1 (0.91)	-
10 Jaitpur	68 (73.91)	38 (41.30)	16 (17.39)	1 (1.09)	1 (1.09)
11 Kabrai	90 (92.78)	23 (23.71)	10 (10.31)	8 (8.25)	-
District	763 (82.40)	268 (28.94)	130 (14.04)	67 (7.24)	19 (2.05)

Note : Figures given in parentheses denote percentages to total villages.

Source : Statistical Bulletin - Hamirpur, Office of the District Economics and Statistics Officer, Hamirpur.

The corresponding percentage of villages located within the radius of 3 Kms. from Junior Basic Schools was highest (95 per cent) in Muskara block and the lowest (63.64 per cent) in Maudaha block. Moreover, the percentage of villages located within the radius of 3 Kms. from Senior Basic Schools in the district during 1981-82 was 43 with maximum (59 per cent) in Jaitpur and minimum (30 per cent) in Charkhari block. Besides, the villages located within the radius of 3 Kms. from Higher Secondary Schools were 9 per cent of the total villages in the district, the corresponding percentages being the highest (24 per cent) in Panwari block and the lowest (0.91 per cent) in Maudaha block. Thus, we observe that inter-block variations in the availability of educational institutions still persist in the district. This calls for effective implementation of the National Programme of Minimum Needs through which these variations can be minimised to a considerable extent. So far as higher education is concerned, there are three degree colleges in the district but all of them are located at district headquarters. Hence persons who aspire for higher education have to cover relatively longer distance to fulfil their aspirations.

Regarding the facilities of technical education, we observe that there were one Government Polytechnic, two Industrial Training Institutes and two Teachers' Training

Colleges in the district during 1981-82. A proper scrutiny of number of seats available and the enrolments made in these institutions reveals that the latter exceeds the former in case of the first two types of institutions, whereas the situation in Teachers' Training Colleges is somewhat different and admissions fall short off the intake.

8.6 Medical and Health Services

The number of allopathic hospitals/dispensaries, which was 23 in the district in 1974-75, increased to 30 during 1981-82, showing the growth of 130.43 per cent. The corresponding growth rates in cases of Aurvedic hospitals, Homoeopathic hospitals and Maternity-cum-Child Welfare Centres recorded to be respectively 104.17 per cent, 275.00 per cent and 142.22 per cent during this period. However, the number of Unani hospitals/Primary Health Centres, which were respectively 4 and 11 in 1974-75, continued to be the same in 1981-82, as shown in Table 8.10.

It is noteworthy that in spite of wide variations in the existing population of different blocks, only one Primary Health Centre is found to be located in each of them. The details of the villages falling within the radius of 3 Kms. from the selected medical and health institutions for different blocks are shown in Table 8.11.

Table 8.10

Medical and Health Services in Hamirpur District

Sl. No.	Medical and health services	1974-75	1981-82	% growth
1.	Allopathic Hospitals/Dispensaries	23	30	130.43
2.	Ayurvedic hospitals	24	25	104.17
3.	Unani hospitals	4	4	100.00
4.	Homoeopathic hospitals	4	11	275.00
5.	Primary Health Centres	11	11	100.00
6.	Maternity-cum-Child Welfare Centres or Sub-Centres	45	64	142.22

Source : Statistical Bulletin - Hamirpur,
Office of the District Economics and
Statistics Officer, Hamirpur.

According to Table No. 8.11, the percentage of villages falling within the radius of 3 Kms. from allopathic hospitals during 1981-82 was 7.13, whereas the corresponding percentage was lowest (1.18 per cent) in Sumerpur block and highest (16.65 per cent) in Sarila block. The blocks lagging behind the district level average in the matter of allopathic hospitals are Sumerpur, Kurara, Gohand, Muskara and Jaitpur. The villages within the radius of 3 Kms. from Aurvedic hospitals in the district during 1981-82 were 8.86 per cent of the total

Table 8.11

Details of Villages Falling Within the Radius of 3 Kms.
From Medical and Health Institutions

Blocks	Villages within the radius of 3 Kms. from:			
	Allopathic hospitals	Ayurvedic hospitals	Unani hospitals	Maternity-cum- Child Welfare Centres
1. Sumerpur	1 (1.18)	7 (8.24)	-	3 (3.53)
2. Kurara	4 (6.45)	10 (16.13)	-	4 (6.45)
3. Sarila	11 (16.67)	6 (9.09)	-	8 (12.12)
4. Gohand	2 (2.70)	8 (10.82)	-	5 (6.76)
5. Rath	9 (14.52)	9 (14.52)	-	9 (14.52)
6. Panwari	9 (8.49)	10 (9.43)	6 (5.66)	8 (7.55)
7. Charkhari	8 (7.14)	7 (6.25)	3 (2.68)	6 (5.36)
8. Muskara	2 (3.33)	4 (6.67)	-	1 (1.67)
9. Maudaha	8 (7.27)	11 (10.00)	5 (4.55)	3 (2.73)
10. Jaitpur	5 (5.43)	5 (5.43)	-	4 (4.35)
11. Kabrai	7 (7.22)	5 (5.15)	5 (5.15)	7 (7.22)
DISTRICT	66 (7.13)	82 (8.86)	19 (2.05)	58 (6.26)

Note : Figures given in parentheses denote percentages to total villages.

Source: Statistical Bulletin - Hamirpur, Office of the District Economics and Statistics Officer, Hamirpur.

villages. Its coverage was highest (16.13 per cent) in Kurara block and lowest (5.15 per cent) in Kabrai block. The blocks lagging behind the district average in this case were Sumerpur, Charkhari, Muskara, Jaitpur and Kabrai. The Unani hospitals are located in Panwari, Charkhari, Maudaha and Kabrai blocks and the remaining seven blocks of the district do not have these hospitals at all. Besides, we find wide inter-block variations in the availability of maternity-cum-child welfare centres also. The villages falling within the radius of 3 Kms. from them in the district during 1981-82 constituted 6.26 per cent of the total villages, whereas the corresponding percentage was the lowest (1.67 per cent) in Muskara block and the highest (14.52 per cent) in Rath block. The blocks, which were having this coverage below the district level average, included Sumerpur, Charkhari, Muskara, Maudaha, and Jaitpur.

8.7 Drinking Water

Although drinking water facilities are deficient in whole of the Bundelkhand region, the district Hamirpur seems to have been better served with this facility. It is reported that all the 926 inhabited villages are having the drinking water facility within the village. However, out of these villages, 43 constituting 4.64 per cent of the total villages

have been identified as problem villages. Maudaha block has the largest (15 villages) problem villages while there are no problem villages in Kurara, Panwari and Muskara blocks. Block-wise details of drinking water facilities are given in the following table:

Table 8.12

Block-wise Drinking Water Facilities in Hamirpur
During 1982

Blocks	Supply of water through pipeline		Villages having drinking water facility within the village	Number of scarcity villages
	No. of villages	Population benefitted		
1	2	3	4	5
1. Sumerpur	1	6715	85	1
2. Kurara	12	1750	62	-
3. Sarila	1	850	66	7
4. Gohand	6	580	74	7
5. Rath	-	-	62	1
6. Panwari	-	-	106	-
7. Charkhari	-	-	112	3
8. Muskara	6	1950	60	-
9. Maudaha	3	567	110	15
10 Jaitpur	23	1655	92	8
11 Kabrai	-	-	97	1
DISTRICT	52	14067	926	43

Source : Statistical Bulletin - Hamirpur, Office of the District Economics and Statistics Officer, Hamirpur.

It is clear from the above table that in all 52 villages are provided with drinking water facilities through pipe-lines, covering the total population of 14067 in the district. Besides, all the villages have masonry wells as source of drinking water.

Chapter-IX

INTER-BLOCK VARIATIONS IN LEVELS OF DEVELOPMENT

As stated in the first chapter, the district of Hamirpur is divided into three parts (North-West plains, Middle plains and Plateau) following the criterion of topographical and physical conditions. Moreover, the analysis of a real differences in sectoral development in subsequent chapters points out that level of development differs from one block to another. But it does not indicate anything regarding the position of overall development of individual blocks. Therefore, inter-block variations in levels of overall development are attempted here. This would require choice of indicators of development of key sectors of the economy and then working out composite index of development based on the selected indicators. The indicators selected for this purpose are listed below:

1. Intensity of Cropping.
2. Percentage of net irrigated area to net area sown.
3. Percentage of area under commercial crops to gross cropped area.
4. Number of registered/unregistered industrial units per '000' Sq. Kms. of area.
5. Percentage of villages within the radius of 3 Kms. from pucca roads.
6. Percentage of villages electrified to total villages.

7. Bank offices per lakh of population.
8. Allopathic hospitals/dispensaries per lakh of population.
9. Villages within the radius of 3 Kms. from Senior Basic Schools.

With a view to working out the composite index of development, first of all, new indices for different blocks in respect of the values of above indicators have been prepared by assuming the average value of the district in respect of each indicator as 100. Subsequently, the composite index of development for each block has been worked out by calculating the mean value of new indices. The block-wise values of the selected indicators and the composite indices are shown in Table 9.1.

It is, however, to be mentioned here that although this technique of constructing composite indices does not seem to be technically sound enough because of assigning equal weights to each indicator, it does provide at least some rough estimates of levels of overall development for different blocks which can be further used for the purposes of comparative analysis. An examination of the above table suggests that all the eleven blocks of the Hamirpur district can be divided into three clear cut groups (High, Medium and Low) according to the values of the composite indices of different blocks, showing their levels of development. The details of these groups alongwith the levels of development of different blocks are given in Table 9.2.

Table 9.1

Value of the Selected Indicators and Composite Indices of Development

Indicators	1	2	3	4	5	6	7	8	9	10	11	12	District
		Sumerpur	Kurara	Sarila	Gohand	Rath	Panwari	Char-khari	Muskara	Maudaha	Jaitpur	Kabrai	
1. Intensity of cropping	102.7 (98.4)	104.9 (100.5)	101.4 (97.1)	104.5 (101.1)	107.1 (102.6)	106.8 (102.3)	104.1 (99.7)	105.2 (100.8)	102.8 (98.5)	104.5 (100.1)	104.4 (100.0)		
2. Percentage of net irrigated area to net area sown	9.7 (57.4)	18.8 (111.2)	12.3 (72.8)	38.7 (229.0)	48.0 (284.0)	22.1 (130.8)	13.9 (82.2)	12.6 (74.6)	3.0 (17.8)	29.9 (176.9)	10.3 (60.9)	16.9 (100.0)	
3. Percentage of area under commercial crops	1.4 (107.7)	3.6 (276.9)	1.3 (100.0)	0.9 (69.2)	1.3 (100.0)	0.4 (30.8)	0.8 (61.5)	1.1 (84.6)	1.6 (123.1)	1.5 (115.4)	1.0 (76.9)	1.3 (100.0)	
4. No. of registered/un-registered industrial units per '000' sq.km. of area	87.2 (242.2)	-	5.6 (15.6)	87.8 (243.9)	13.5 (37.5)	55.5 (154.2)	11.5 (31.9)	65.8 (182.8)	13.1 (36.4)	27.8 (77.2)	11.4 (31.7)	36.00 (100.0)	
5. Percentage of villages within the radius of 3 kms. from pucca roads	47.1 (102.3)	40.3 (65.5)	25.8 (161.2)	63.5 (110.7)	43.6 (81.5)	32.1 (68.0)	26.8 (126.9)	50.0 (101.5)	33.7 (85.5)	41.2 (104.6)	39.4 (100.0)		
6. Percentage of villages electrified to total villages	73.0 (251.7)	62.0 (213.8)	36.0 (124.1)	19.0 (65.5)	16.0 (55.2)	16.0 (55.2)	11.0 (37.9)	28.0 (96.6)	30.0 (103.4)	13.0 (44.8)	32.0 (110.3)	29.0 (100.0)	
7. Bank offices per lakh of population	2.18 (69.4)	-	-	-	-	5.00 (159.2)	-	3.49 (111.15)	1.69 (53.82)	3.33 (106.0)	99 (31.5)	3.14 (100.0)	
8. Allopathic hospitals/dispensaries per lakh of population	2.00 (64.5)	3.6 (116.1)	4.4 (141.9)	-	4.00 (129.0)	3.15 (101.6)	-	2.3 (74.2)	1.7 (54.8)	-	2.00 (64.5)	3.1 (100.0)	

Table 9.1 (contd...)

	1	2	3	4	5	6	7	8	9	10	11	12	13
9. Villages within the radius of 3 kms. from Senior Basic Schools		41.2 (95.8)	46.8 (108.8)	42.4 (98.6)	48.7 (113.3)	37.1 (86.3)	48.1 (111.9)	30.4 (70.7)	35.0 (81.4)	49.1 (114.2)	48.7 (113.3)	34.0 (79.1)	43.0 (100.00)
Total value of indicators	1106.6	1145	715.6	983.2	905.3	927.5	451.9	933.1	703.5	822	660	900	
Average value of indicators (composite indices)		(122.9)	(127.2)	(79.5)	(109.2)	(100.6)	(103.1)	(50.2)	(103.7)	(78.2)	(91.3)	(73.3)	(100.00)

Table 9.2

Classification of Blocks According to Composite
Indices of Development

Level of Development/ Composite index of Development	Blocks
1. <u>High</u> (120 and above)	1. Sumerpur 2. Kurara
2. <u>Medium</u> (100 to 120)	1. Gohand 2. Rath 3. Ranwari 4. Muskara
3. <u>Low</u> (Below 100)	1. Charkhari 2. Kabrai 3. Sarila 4. Maudaha 5. Jaitpur

As shown above, there seems to be wide variations in levels of overall development of different blocks. The blocks of Sumerpur and Kurara, which constitute north-west plains of the district and are contiguous, occupy place in the category of high level of development. Although these two blocks fall in one and the same category of development, Sumerpur is much advanced in industrial sector and development

of infra-structure is also quite high, whereas Kurara is comparatively much advanced in agriculture and the development of non-agriculture sector is fairly commensurate with the district level. Moreover, the four blocks of Gohand, Rath, Panwari and Muskara which constitute middle plains of the district, have attained medium level of development. Intensity of cropping in these blocks is comparatively high and irrigation facilities are almost at par with the district level. Industrial activities are geared up to some extent in these blocks but infra-structural facilities seem to be inadequate. The remaining five blocks of Sarila, Charkhari, Maudaha, Jaitpur and Kabrai, which primarily constitute south-west plateau of the district, are found to be at low level of development. Low intensity of cropping, low irrigation facilities, low level of industrial activities and relatively lower order of infra-structural facilities are some of the major characteristics of these blocks.

Almost all the blocks falling in DPAP except Sumerpur are found to be at low level of development. These blocks including Sumerpur generally lack irrigation facilities. But the case of Sumerpur block is different from rest of the blocks and the former occupies its position in the category of high level of development because of concentration of non-agricultural activities particularly of industrial sector and the higher level of development in infrastructure.

Chapter-X

SUMMARY AND CONCLUSION

Hamirpur with an area of 7166 Sq. Kms. is one of the five districts of Bundelkhand region of Uttar Pradesh. The district is divided into three main natural regions namely, North-West plains consisting of Kurara, Sarila, Rath and Gohand blocks; the middle plains forming the area of Muskara, Maudaha and Sumerpur; and the South-West Plateau consisting of Kabrai, Charkhari, Jaitpur and Panwari blocks. The character of soil of these three regions is familiar with the well known varieties of Bundelkhand region namely, Mar, Kabar, Parua and Rakar. The soil available in the district consists of poor organic contents and is prone to soil erosion. The extension of irrigation network is constrained and hence augmenting the level of agricultural productivity has become hard nut to crack.

The total reporting area of the district in 1980-81 was 7,16,176 hectares, out of which 70.47 per cent was under cultivation. The forest covered 5.20 per cent of the total reporting area. The proportion of culturable waste and fallow land was approximately 14 per cent.

The district is characterised with large variations in temperature ranging from 2°C - 3°C in winter to 28°C - 48°C in summer. The rainfall is irregular and not even enough

to sustain the agriculture, it is also erratic in nature. The major rivers of the district are Yamuna, Betwa, Dhasan, Ken and several minor streams. Most of these rivers are seasonal in character because of inadequate and erratic rainfall. The surface and ground water resources available in the district are comparatively low. The utilisable surface water was only 811 MCM and the area irrigated through this source was 66,307 hectares in 1980-81 constituting 77.40 per cent of the total irrigated area of the district. Similarly, the ground water availability in the district was about 790 MCM, of which 23.98 per cent was utilised for irrigation upto 1980. Thus, the district seems to have still a sizeable potentialities of surface and ground water resources. The district is poorly endowed with mineral resources. The only available minerals are pyrophyllite and diaspore. Besides, good quality Mauram and sand stone are also available. The livestock population in the district is in the poor state. The growth of total livestock and milch cattle is found to be lower in the district as against the State. Not only this, the density of livestock population is also comparatively low.

According to 1981 Census, the total population of the district is 11.94 lakh, giving decennial growth of 20.84 per cent as against 26.74 per cent in the region and 25.49 per cent in the State. A higher pace of migration owing to

frequent droughts and better effectiveness of family welfare programme seem to have pulled down the growth of population in the district during the previous decade. The rural population constitutes 83.39 per cent of the total population as against 80.11 per cent in the region and 81.99 per cent in the State. Although the proportion of urban population is lower in the district, its growth is relatively higher which might be because of its low base in 1971. The district is sparsely populated. The density of population according to 1981 Census works out to 166 as against 184 in the region and 377 in the State. The proportion of Scheduled Caste population in the district is 24.50 per cent which is lower than the region (25.60 per cent) but significantly higher than the State (21.37 per cent). The literacy accounts for 26.27 per cent as against 28.69 per cent in Bundelkhand region and 27.40 per cent in the State.

The workforce constitutes 31.15 per cent of the total population in the district as against 29.13 per cent in the State. But the growth rate of workforce in the district during 1971-81 was lower (15.03 per cent) than 18.18 per cent in the State which might be because of less expansion of economic activities in the former. The proportion of rural main workers to total rural population is 32.13 per cent, whereas the corresponding proportion of urban main workers

comes to 26.22 per cent. The participation of male in the total workforce is 87.17 per cent and the female proportion is 12.83 per cent only. The percentage of total workforce engaged in agriculture in the district is 81.79 per cent, as against 74.33 per cent in the State. Although the proportion of cultivators increased during the previous decade, there was a decline in the proportion of agricultural labourers which might be because of distribution of land among landless agricultural labourers. The workforce employed in household industry and other sectors, however, increased during the previous decade. The decline in the percentage of rural workforce and simultaneous increase in proportion of urban workforce during 1971-81 might be attributed to faster growth of urbanisation in the district. The growth of urban population in the district during 1971-81 was 102.40 per cent as against 71.91 per cent in the region and 61.20 per cent in the State. A higher growth of urban population in the district is probably on account of emergence of new towns and also due to the larger concentration of population in the already existing towns.

Owing to erratic nature of rainfall and low availability and utilisation of ground and surface water resources, the district is prone to drought. Hamirpur was declared drought affected district in the years 1950-51, 57-58, 59-60, 62-63, 63-64, 64-65 during the pre-Green Revolution period and

1965-66, 66-67, 72-73, 73-74, 74-75, 75-76, 76-77 and 1979-80 during the post-Green Revolution period. Of the 14 declared drought years, only seven years in foodgrains, eight years in Sugarcane and six years in Potato experienced the loss in cultivated area. Similarly, eleven years in foodgrains, nine years in Sugarcane and eight years in potato experienced production loss. Whereas the number of years experiencing loss in productivity was eleven years in foodgrains, nine years in sugarcane and ten years in potato. The nature of drought was most severe in 1966-67 where loss was experienced in respect of cultivated area, production and productivity of all the three categories of crops i.e., foodgrains, sugarcane and potato. The frequency of drought in terms of number of declared drought years was much less in pre-Green Revolution period as compared to the post-Green Revolution and onwards. Consequently, the loss in agriculture is found to be of lower order in the pre-Green Revolution period as compared to the post-Green Revolution period.

Hamirpur is rated to be one of the extremely backward districts of Bundelkhand region in the State. The factors associated with the backwardness of this district are preponderance of severe sectoral lags and low levels of agricultural and industrial productivity. The situation of severe sectoral lags is witnessed by the contri-

contributions of primary and secondary sectors to total net domestic product. The contribution of primary sector (agriculture and animal husbandry) to total net domestic product in the district, which was 96.39 per cent in 1970-71, decreased to 91.17 per cent during 1980-81, however the corresponding percentages in respect of manufacturing sector worked out to 3.61 and 8.83 during this period. Contrary to this, the contributions of primary and secondary sectors to the net domestic product at the regional level during these two points of time were respectively 93.05 and 6.95 and 89.62 and 10.32. Whereas these percentages at the State level for the two respective years worked out to 86.80 and 82.00 per cent in case of the primary sector and 13.20 and 18.00 in respect of the secondary sector.

Turning to the aspect of employment, we find that share of workers engaged in agriculture (cultivators and agricultural labourers) to total workers in the district decreased from 84.81 per cent in 1970-71 to 81.79 per cent during 1980-81 as against the corresponding percentages of 76.91 and 74.71 at the State level. Consequently, the share of workers engaged in non-agriculture sector to total workers in the district increased from 15.19 per cent in 1970-71 to 18.21 per cent during 1980-81, whereas the corresponding percentages worked out to be respectively 23.09 and 25.29 at the State level.

These sectoral contributions both in terms of income and employment suggest that diversification of economy, which took place during the previous decade, was comparatively of the lower order in the district, exhibiting signs of severe sectoral lags.

Although the contribution of primary sector to total net domestic product decreased during the period, it is still substantial. Besides, about 82 per cent of the total work-force is engaged in agriculture and majority of the population depends upon it for their livelihood. Hence, agriculture has to play most crucial role in development of the district.

The average size of land holdings in the district decreased from 2.96 ha. in 1970-71 to 2.58 ha. during 1976-77, whereas the corresponding decline at the State level was 1.16 ha. to 1.05 ha. We notice an increase in operational holdings during the period 1970-77 but total area under operational holdings showed a marginal decline. The increase in number of land holdings might have resulted because of the distribution of surplus land among the landless agricultural labourers and sub-division and fragmentation of land holdings, whereas the faster urbanisation might be the cause of fall in the operated area of the total holdings.

There was a considerable increase in net area sown from 66.88 per cent in 1974-75 to 70.47 per cent during 1980-81 with a simultaneous decrease in proportion of culturable waste and fallow land from 18.34 per cent to 14.30 per cent. There is a wide variation in percentage of net area sown among the blocks, the lowest being 51.66 per cent in Jaitpur and the highest (77.10) in Maudaha which might be because of the differences in topographical conditions.

Jowar/Bajra and Wheat are the major crops of the district. The percentage of area under foodgrain crops to gross cultivated area in the district during 1980-81 was as high as 93.51, whereas the corresponding percentage of the area under commercial crops was hardly 1.29 per cent with maximum (3.59 per cent) in Kurara block and the minimum (0.40 per cent) in Panwari block. Moreover, proportion of area under total pulses slid down to some extent during the reference period, but its contribution to gross cropped area was substantial, the highest (47.69 per cent) being in Sarila block and the lowest (30.71 per cent) in Jaitpur block.

The percentage of area covered under different crops in Kharif season remained somewhat constant (around 22 per cent) in the district but the corresponding coverage in respect of Rabi season was as high as 71.40 per cent.

Although the cultivated area per agricultural worker in the district is relatively high, the yield per ha. of important crops is found to be considerably low because of the low adoption of improved agricultural practices in terms of consumption of fertilisers and use of pesticides, besides inadequacy of irrigation facilities. In spite of various obstacles in the path of progress of agriculture, the district is found to be self sufficient in foodgrains and its availability exceeds the requirement.

The coverage of area under high yielding varieties of paddy was the highest (71.41 per cent) in Gohand and the lowest (4.39 per cent) in Muskara, whereas the corresponding percentages in respect of wheat were 60.32 in Jaitpur and 4.36 in Charkhari. The consumption of fertiliser in the district is comparatively low. Its use per ha. of cropped area in 1980-81 was 6.72 Kg. as against the corresponding figures of 11.80 Kg. in Bundelkhand and 45.33 Kg. in the State. Moreover, its use was the highest (20.12 Kg.) in Rath and the lowest (1.18 Kg.) in Jaitpur.

The sources of irrigation available in the district consist of both major and minor. The total length of canal, which was 591 Kms. in 1976-77, increased to 908 Kms. during 1981-82, showing the growth of 53.64 per cent. Besides, there were, in all, 53 State tubewells, 230 private tubewells, 4049 pumping sets. 11976 masonry wells, 490 persian wheels and 24

ponds in the district in 1976-77 which stood at 228, 905, 6074, 15284, 227 and 24 respectively during 1981-82. As a result of these changes, the total irrigation potential created in the district, which was 1.22 lakh ha. in 1976-77, increased to 1.80 lakh ha. during 1981-82, showing the growth rate of 47.54 per cent. Canals are largely concentrated in Gohand, Rath, Charkhari and Kabrai blocks, whereas State tubewells are mainly found in Sumerpur, Kurara, Sarila, Muskara, Gohand and Maudaha blocks. Concentration of private tubewells is the highest in Maudaha block and the lowest in Rath block but Jaitpur has no private tubewells at all. Number of masonry wells showed appreciable increase during the period; Rath block experienced the highest positive growth, whereas Kurara experienced negative growth of masonry wells. In case of masonry wells fitted with persian wheels, almost all the blocks of the district experienced negative growth except Charkhari and Muskara.

Moreover, the utilisation of irrigation potential created during the period 1976-81 increased from about 84 thousand ha. to about 86 thousand ha., showing the growth of 2.38 per cent. But the utilisation percentage of the irrigation potential created considerably decreased from 69.31 in 1976-77 to 47.62 during 1980-81. This utilisation percentage in case of major irrigation works decreased from 86.98 in

1976-77 to 52.35 per cent during 1980-81, whereas in case of minor irrigation works, the corresponding utilisation percentage significantly increased from 34.43 to 38.11 during this period.

In sum, there has been a tremendous increase in irrigation potential in the district during 1976-81, but the rate of its utilisation has significantly gone down. With the result, the percentage of net irrigated area to net area sown remained almost constant (around 17 per cent) and percentage of gross irrigated area to gross cropped area instead of increasing showed a marginal decline from 16.58 in 1976-77 to 16.43 during 1980-81. Thus, under-utilisation of irrigation potential seems to be one of the major constraints in development of agriculture. In view of the availability of ground water resources in sufficient quantity, there seems to be a wide scope for development of additional minor irrigation works at suitable locations in the district. Effective utilisation of the already created irrigation potential on the other hand, needs special efforts with a view to augmenting the level of irrigation coverage.

The total livestock population in the district showed the growth rate of 5.84 per cent during the period 1972-78, as against 6.39 per cent in the State. Besides, the livestock

population per ha. of geographical area showed an increasing trend at both the levels. But the proportion of breedable bovine population slid down in both cases. Majority of the milch cattle are of indigenous breed and hence average milk yield of she-buffaloes in the district is hardly 1.01 litres as against 2.90 litres in the State. Proportionately, the strength of sheep and goat in the district is much higher as compared to the State, obviously because of the availability of shrubs and better grazing facilities, besides suitable climatic conditions. The strength of poultry birds has also gone up but its growth in the district is found to be lower than the State.

With a view to providing proper health cover to the livestock population, there has been appreciable increase in different types of veterinary institutions in the district during Seventies. But the existing strength of these institutions still fall short off the norms prescribed under Intensive Cattle Development Project (5,000 milch animals per veterinary hospital and 1,000 milch animals per stock-man centre). Sarila and Kabrai seem to be the most deficient blocks in respect of the availability of veterinary institutions.

Out of the total water area of 5,679 ha. under pisciculture, a slightly higher than 45 per cent is concentrated in Kabrai and the rest is located in Panwari, Charkhari and Jaitpur. The production of fish per ha. of water area in the district is extremely low, i.e. 7.73 Kg. It is 9.26 Kg. in Kabrai, 8.44 Kg. in Panwari, 7.14 Kg. in Charkhari and 4.16 Kg. in Jaitpur.

Hamirpur is one of the extremely backward districts from the point of view of industrial development also. The contribution of manufacturing sector to total net domestic product in the district during 1980-81 was 8.83 per cent as against 10.38 per cent in Bundelkhand region and 16.39 per cent in the State. Also in respect of employment we find that share of workers engaged in non-agricultural sector in the district during 1980-81 was 18.21 per cent against the corresponding share of 21.55 per cent in the region and 25.29 per cent in the State. Hence, contribution of manufacturing sector in terms of income and employment is found to be comparatively low in the district.

There were 164 small scale industrial units registered with Directorate of Industries, Kanpur and 2,417 unregistered cottage and village industries during the year 1979-80. Registered units are mainly located in Sumerpur, Maudaha, Jaitpur, Kabrai and Kurara blocks and rest of the blocks do

not have any registered units at all. However, unregistered cottage and village industries are found to be widely scattered throughout the district. Besides, out of the total 1,314 hand-looms, most of them are reported to be operating under Co-operative Societies.

The district is also found to be deficient in infrastructure. The length of pucca roads per '000' sq. km. of area in the district is extremely at low level (114 Km.) as compared to 210 Km. in the State. However, there seems to be some improvement in road network in the district during the period 1974-82. The proportion of villages falling within the radius of 3 Kms. from Pucca road in the district increased from 30 per cent to 39.42 per cent during this period with maximum (63.51 per cent) in Gohand block and the minimum (25.76 per cent) in Sarila block.

The district is backward in power development also. The percentage of villages electrified to the total villages in the district during 1981-82 was 29 only with maximum (73 per cent) in Sumerpur and minimum (11 per cent) in Charkhari block. The blocks of Charkhari, Jaitpur, Rath and Panwari are still deficient in rural electrification. Moreover, the per capita consumption of electricity in the district is found to be considerably low (24.71 KWH) as compared to 87 KWH in the State. Besides, of the total electricity consumed

in the district, only 9 per cent is utilised for industrial and commercial purposes, 16 per cent is put to domestic uses and the rest 75 per cent is utilised for irrigation and de-watering.

Regarding the availability of financial institutions, it is found that out of the total 31 bank branches, as many as 20 are located in urban parts and only eleven bank branches are available in the rural areas. Existing bank branches seem to be inadequate as about 83 per cent of the total villages in the district are still found to be at least 5 Kms. away from the locations of these branches. Moreover, blocks of Kurara, Sarila, Gohand, Rath and Charkhari do not have any bank branches at all. As a result of the progress made in total deposits and credit advances during 1979-82, the credit : deposit ratio in the district stood at 20.79 per cent against 43.89 per cent in the State.

Out of the total 107 primary agricultural Co-operative Societies, the highest number was located in Panwari and the lowest in Kurara block. The loan advanced by these societies per borrower in the district was Rs.310 as compared to the corresponding amount of Rs.626 in the State. Besides, 4 land development banks, 11 primary non-agricultural co-operative societies and 7 primary marketing societies were reported to be working in the district during 1982. The marketing Societies are mainly concentrated in Sumerpur, Kurara, Rath, Charkhari, Maudaha and Kabrai blocks.

In all, there were 103 Junior Basic Schools, 169 Senior Basic Schools, 83 Higher Secondary Schools, 3 Degree Colleges in the district during 1981-82. A relatively higher growth in Senior Basic Schools, High Schools and Degree Colleges in the district during Seventies appears to be need based because of recently developed craze for higher education among the villagers. An analysis of spatial distribution of existing educational institutions reveals that still there exists wide variations in the availability of different types of educational institutions among different blocks of the district. This calls for the effective implementation of National Programme of Minimum Needs and follow-up of the norms prescribed for creation of educational institutions. Besides, the facility of technical education available in the district seems to be inadequate in view of the exceeding numbers of enrolment to available seats.

Like education, there has been appreciable increase in medical and health institutions also. There were 30 Allopathic Hospitals/Dispensaries, 25 Ayurvedic, 4 Unani, 11 Homoeopathic hospitals and 11 Primary Health Centres in the district during 1981-82. There appears to be uneven distribution of these institutions among different blocks of the district. The blocks of Sumerpur, Kurara, Gohand, Muskara and Jaitpur are lagging behind the district level average in the matter of

Allopathic Hospitals. A similar kind of inter-block variations is also experienced in case of other hospitals like Ayurvedic and Unani. These facilities seem to be inadequate in the district which is reflected by the low percentage of villages falling within the radius of 3 Km. from the existing medical and health institutions.

The district Hamirpur seems to have been better served with drinking water facilities. Only 43 villages out of the total 926 villages, constituting 4.64 per cent of the total villages, were identified as problem villages in the year 1981-82. Of these problem villages, 15 were located in Maudaha block and the rest were scattered in Sarila, Gohand, Jaitpur, Charkhari, Rath, Sumerpur and Kabrai blocks.

According to the composite indices of development of different blocks as attempted in the present case, the blocks of Sumerpur and Kurara, which constitute the north-west plains of the district and are contiguous, occupy place in the category of high level of development. Moreover, four blocks of Gohand, Rath, Panwari and Muskara, which constitute middle plains of the district, have attained medium level of development. The remaining five blocks of Sarila, Charkhari, Maudaha, Jaitpur and Kabrai, which basically constitute the south-west plateau of the district, are found to be at low level of

development. Almost all the blocks falling in DPAP, except Sumerpur are found to be at the low level of development. The low intensity of cropping, low irrigation facilities, low level of industrial activities and relatively lower order of infrastructural facilities are some of the common characteristics of these blocks, excepting Sumerpur where concentration of non-agricultural activities particularly manufacturing and development of infrastructure are found to be of high order.

Annexure - I

Block-wise Land Use Pattern in Hamirpur

Blocks	Percentages)											
	Forest		Culturable waste		Fallow Land		Barren and un-cultivable waste		Land put to Non-Agricultural uses		Pasture Land	
	1974-75	1980-81	1974-75	1980-81	1974-75	1980-81	1974-75	1980-81	1974-75	1980-81	1974-75	1980-81
1	2	3	4	5	6	7	8	9	10	11	12	13
1. Sumerpur	0.42	1.01	3.37	1.94	15.00	8.85	2.80	2.66	4.25	5.56	-	0.08
2. Kurara	10.49	10.63	2.43	1.76	6.60	7.69	6.13	5.55	6.63	7.40	-	0.07
3. Sarila	10.41	10.94	6.08	3.09	7.22	6.10	6.36	6.04	6.19	6.68	-	0.02
4. Gohand	3.29	3.49	6.12	4.33	4.43	6.97	3.47	3.01	5.90	6.79	0.03	0.03
5. Rath	13.65	13.44	5.00	2.71	7.92	5.08	2.88	2.36	5.38	6.63	-	-
6. Panwari	7.00	6.77	7.90	4.64	10.88	8.24	4.20	4.54	5.17	5.31	-	-
7. Charkhari	5.16	5.01	9.77	7.90	11.76	8.88	2.90	2.79	6.12	5.98	-	-
8. Muskara	3.06	2.38	5.41	3.33	17.65	7.52	4.80	4.40	4.32	4.64	-	0.05
9. Maudaha	0.19	0.17	6.52	3.51	9.89	9.16	1.75	1.51	4.30	5.27	-	0.13
10 Jaitpur	9.78	9.88	15.55	9.67	13.70	17.12	3.49	3.30	4.64	5.24	0.95	0.54
11 Kabral	2.16	2.07	13.07	8.77	10.07	13.77	4.39	4.45	6.07	6.15	-	-
District	5.22	5.20	7.76	4.80	10.58	9.50	3.78	3.55	5.36	6.08	0.07	0.08

Contd...

Annexure - I contd....

(Percentages)

Blocks	Area under Miscellaneous groves, orchards, trees not included in net area				Net area sown		Cropping intensity	
	1974-75 sown		1980-81	1974-75	1980-81	1974-75	1980-81	
	14	15	16	17	18	19		
1. Sumerpur	0.16	0.14	74.00	79.76	101.12	102.74		
2. Kurara	0.13	0.14	67.53	65.76	100.15	104.87		
3. Sarila	0.04	0.05	63.70	67.08	102.56	101.43		
4. Gohand	1.08	1.02	75.68	74.36	106.42	104.47		
5. Rath	0.45	0.46	64.82	69.32	113.22	107.11		
6. Panwari	1.48	1.29	63.37	69.21	104.13	106.82		
7. Charkhari	0.21	0.15	64.08	69.29	102.54	104.06		
8. Muskara	0.12	0.26	64.64	77.42	106.47	105.21		
9. Maudaha	0.25	0.16	77.10	80.09	101.75	102.84		
10. Jaitpur	0.23	0.20	51.66	54.05	106.68	109.49		
11. Kabrai	0.15	0.12	64.09	64.67	101.72	104.49		
District	0.35	0.32	66.88	70.47	103.87	104.42		

Source : Statistical Bulletin - Hamirpur, Office of the District Economics and
Statistics Officer, Hamirpur.

Annexure - II
Block-wise Percentage of Area under different crops to Gross Cropped Area in
Hamirpur

Blocks	Paddy	Wheat	Other Cereals	Total Cereals	Urd	Moong	Arhar	Gram	Other Pulses
1	2	3	4	5	6	7	8	9	10
1. Sumerpur									
1974-75	0.29	25.04	19.68	45.02	0.02	-	6.41	41.64	1.46
1980-71	0.12	30.40	19.81	50.33	0.55	0.01	6.34	37.16	1.38
2. Kurara									
1974-75	1.74	25.07	17.54	44.35	0.17	-	5.48	34.08	9.52
1980-81	1.04	27.32	22.19	50.54	0.74	-	6.81	26.97	8.28
3. Sarila									
1974-75	0.31	16.59	25.44	42.75	0.05	-	7.87	36.63	2.12
1980-81	0.39	17.50	27.83	45.72	0.29	0.04	8.83	35.83	3.15
4. Gohand									
1974-75	0.66	26.29	16.92	43.87	0.19	0.03	5.20	35.00	6.64
1980-81	1.28	29.60	19.06	49.94	1.06	0.15	5.62	31.78	6.98
5. Rath									
1974-75	5.68	27.95	17.99	51.62	0.48	-	5.10	28.48	6.67
1980-81	2.06	28.28	18.48	48.82	2.27	0.31	5.04	27.52	10.05
6. Panwari									
1974-75	1.27	24.54	25.91	51.72	0.88	0.04	7.37	30.24	2.08
1980-81	1.29	28.75	24.40	54.43	1.74	0.26	6.53	28.76	2.47
7. Charkhari									
1974-75	0.65	26.70	18.99	46.34	1.05	0.01	5.74	36.17	0.24
1980-81	0.46	31.69	18.15	50.31	0.76	0.15	5.16	32.84	0.91
8. Muskara									
1974-75	2.67	24.19	23.33	50.19	0.05	-	7.21	36.74	0.52
1980-81	0.26	30.59	19.12	49.97	0.30	0.07	5.85	36.74	1.68
9. Maudaha									
1974-75	0.45	30.35	17.06	47.86	0.02	-	5.51	38.25	0.76
1980-81	0.44	34.76	15.39	50.60	0.07	0.02	4.95	37.71	1.29
10. Jaitpur									
74-75	1.83	22.94	30.62	55.40	4.02	0.02	7.54	20.29	0.40
80-81	0.95	31.02	27.87	59.84	3.94	0.10	6.86	18.76	1.04
11. Kabrai									
74-75	1.34	28.24	19.27	48.84	1.59	0.01	5.57	32.55	0.85
80-81	1.03	34.00	18.48	53.51	1.22	0.18	4.94	31.82	0.85
District	74-75	1.31	25.79	20.53	47.64	0.70	6.16	34.54	2.34
80-81	0.75	30.09	20.53	51.08	1.01	0.11	5.28	32.58	2.85

Annexure - II contd...

Blocks	Total		Total		Mustard	Ground-nut	Potato	Sugar-cane	Tobacco	Total commercial crops		Other crops
	pulses	11	foodgrain	12								
1. Sumerpur	1974-75 80-81	49.53 45.45	94.55 95.78	0.69 1.33	- 0.01	0.01 0.01	0.01 0.01	0.01 -	0.01 -	0.72 1.35	4.73 2.87	
2. Kurara	74-75 80-81	49.26 42.73	93.60 93.27	2.09 3.42	0.11 0.17	0.02 -	0.06 -	- -	- -	2.28 3.59	4.12 3.14	
3. Sarila	74-75 80-81	46.67 47.69	89.02 93.41	1.11 1.34	- -	- -	0.11 -	- -	- -	1.22 1.34	9.76 5.25	
4. Gohand	74-75 80-81	47.06 45.58	90.93 95.52	0.34 0.68	0.01 0.04	0.02 0.01	0.31 0.12	- -	- -	0.68 0.85	8.39 3.63	
5. Rath	74-75 80-81	40.73 45.20	92.35 94.02	0.08 0.26	- 0.01	0.18 0.05	1.54 0.98	0.05 0.03	0.05 0.03	1.85 1.33	5.80 4.65	
6. Panwari	74-75 80-81	40.62 39.76	92.34 94.20	0.10 0.13	0.16 0.01	0.03 0.03	0.62 0.31	0.01 0.02	0.01 0.02	0.92 0.40	6.74 5.40	
7. Charkhari	74-75 80-81	43.21 40.02	89.55 90.32	0.31 0.60	0.04 0.04	0.03 0.02	0.19 0.14	- 0.02	- 0.05	0.57 0.82	9.88 8.86	
8. Muskara	74-75 80-81	44.52 44.63	94.71 94.60	0.74 0.94	- -	0.02 -	0.11 0.05	0.05 0.10	0.05 0.10	0.92 1.09	4.37 4.31	
9. Maudaha	74-75 80-81	44.56 44.03	92.42 94.63	0.79 1.53	0.02 -	0.02 0.01	- 0.01	- 0.05	- 0.05	0.83 1.60	6.75 3.77	
10. Jaitpur	74-75 80-81	32.28 30.71	87.68 90.55	0.31 0.24	0.46 0.23	0.05 0.07	1.85 0.87	0.01 0.04	0.01 0.04	2.68 1.45	9.64 8.00	
11 Kabrai	74-75 80-81	40.12 38.84	88.96 92.35	0.45 0.81	0.01 0.05	0.04 0.03	0.28 0.13	- 0.01	- 0.01	0.78 1.03	10.26 6.62	
DISTRICT	74-75 80-81	43.76 42.43	91.40 93.51	0.62 1.02	0.06 0.04	0.03 0.02	0.36 0.18	- 0.03	- 0.03	1.07 1.29	7.53 5.20	

Note : (i) Other Cereals include Burley, Jowar, Bajra, Maize and small millets.

(ii) Other pulses include Masoor, Pea, etc.

(iii) Other Commercial crops include Alsi, Tili, Rendi, Ground-nut, Sugarcane, Potato, Tobacco, Sanai and Haldi etc.

Source : Statistical Bulletin - Hamirpur, Office of the District Economics and Statistics Officer, Hamirpur.

Annexure - III

Block-wise Production of Different Crops in Hamirpur

(Quintals)										
Blocks	Paddy	Wheat	Other Cereals	Total Cereals	Arhar	Moong	Gram	Urd	Other pulses	
1	2	3	4	5	6	7	8	9	10	
1. Sumerpur	1574-75 270 (0.12)	81198 (35.90)	48673 (21.52)	130141 (57.55)	18301 (8.09)	-	73985 (32.71)	31 (0.01)	3697 (1.63)	
	80-81 240 (0.06)	191530 (46.28)	52480 (12.68)	244250 (59.02)	41660 (10.07)	10	123740 (29.90)	160 (0.04)	4020 (0.97)	
2. Kurara	74-75 1097 (0.72)	55240 (36.00)	28573 (18.63)	84910 (55.35)	10641 (6.94)	3	41142 (26.82)	207 (0.13)	16499 (10.76)	
	80-81 1230 (0.49)	116900 (46.61)	36690 (14.63)	154820 (61.73)	27050 (10.79)	-	54480 (21.72)	130 (0.05)	14310 (5.71)	
3. Sarila	74-75 270 (0.15)	49736 (27.90)	60672 (34.03)	110678 (62.07)	2077 (1.16)	1	60173 (33.75)	81 (0.04)	5286 (2.96)	
	80-81 660 (0.20)	99910 (30.52)	67550 (20.64)	168120 (51.36)	47400 (14.48)	20	103700 (31.68)	70 (0.02)	8020 (2.45)	
4. Gohand	74-75 564 (0.27)	78218 (37.57)	40465 (19.44)	119247 (57.28)	13641 (6.55)	16	57074 (27.42)	311 (0.15)	17879 (8.59)	
	80-81 2020 (0.56)	180850 (50.04)	43760 (12.11)	226630 (62.71)	29650 (8.20)	80	88090 (24.38)	250 (0.07)	16670 (4.61)	
5. Rath	74-75 3764 (2.31)	64025 (39.36)	34293 (21.08)	102082 (62.76)	10381 (6.38)	-	36056 (22.17)	618 (0.38)	13512 (8.31)	
	80-81 2610 (0.91)	144880 (50.77)	35040 (12.28)	182530 (63.96)	21270 (7.45)	130	61510 (21.55)	440 (0.15)	19510 (6.84)	
6. Panwari	74-75 902 (0.51)	60675 (34.26)	53026 (29.94)	114603 (64.70)	16053 (9.06)	22	40968 (23.13)	1210 (0.68)	4271 (2.41)	
	80-81 1970 (0.61)	152860 (47.17)	54490 (16.82)	209320 (64.59)	33230 (10.25)	150	75280 (23.23)	400 (0.12)	5670 (1.75)	
7. Charkhari	74-75 784 (0.28)	112006 (39.47)	63331 (22.32)	176121 (62.06)	21222 (7.48)	9	83155 (29.30)	2465 (0.87)	828 (0.29)	
	80-81 1180 (0.23)	260820 (50.54)	64030 (12.41)	326030 (63.17)	43810 (8.49)	140	142300 (27.57)	370 (0.07)	3460 (0.67)	

Annexure - III (contd..) (Quintals)

	1	2	3	4	5	6	7	8	9	10
8. Muskara	1975-75	2063	65271	49578	116912	17077	2	54152	88	1123
		(1.09)	(34.47)	(26.18)	(61.74)	(9.02)	-	(28.60)	(0.05)	(0.59)
	1980-81	510	190290	53210	244010	38820	50	123010	90	4920
		(0.12)	(46.31)	(12.95)	(59.38)	(9.45)	(0.01)	(29.94)	(0.02)	(1.20)
9. Maudaha	74-75	698	163861	71669	236228	26216	8	113178	84	3224
		(0.18)	(43.21)	(18.90)	(62.30)	(6.91)	-	(29.85)	(0.02)	(0.85)
	80-81	1310	298890	62180	362380	49060	20	189390	30	5630
		(0.22)	(49.28)	(10.25)	(59.75)	(8.09)	-	(31.23)	-	(0.93)
10 Jaltpur	74-75	1087	41906	53773	96766	13726	8	22982	4643	601
		(0.78)	(30.21)	(38.76)	(69.75)	(9.89)	-	(16.57)	(3.35)	(0.43)
	80-81	1140	141060	49240	191440	27680	50	38940	720	2000
		(0.44)	(54.08)	(18.88)	(73.40)	(10.61)	(0.02)	(14.93)	(0.28)	(0.77)
11 Kabrai	74-75	1571	116533	64328	182432	20258	11	73605	3775	1177
		(0.56)	(41.43)	(22.87)	(64.86)	(7.20)	-	(26.17)	(1.34)	(0.42)
	80-81	2400	246990	58960	308350	38430	170	125830	430	2380
		(0.50)	(51.93)	(12.40)	(64.84)	(8.08)	(0.04)	(26.46)	(0.09)	(0.50)
DISTRICT	74-75	13070	888669	568381	1470120	188290	80	656470	13513	68097
		(0.55)	(37.08)	(23.72)	(61.34)	(7.86)	-	(27.39)	(0.56)	(2.84)
	80-81	15270	2024980	577630	2617880	397560	820	1126270	3090	86590
		(0.36)	(47.85)	(13.65)	(61.86)	(9.39)	(0.02)	(26.61)	(0.07)	(2.05)

Contd.....

Annexure - III (contd....)

(Quintals)

Blocks	Total pulses	Total Foodgrains	Mustard	Ground- nut	Sugar- cane	Potato	Tobacco	Others
1	11	12	13	14	15	16	17	18
1. Sumerpur	1974-75 96014 (42.45)	226155 (100.00)	897	-	787	425	20	-
	1980-81 169590 (40.98)	413840 (100.00)	2350	50	840	760	-	4100
2. Kurara	74-75 68492 (44.65)	153402 (100.00)	1844	296	4987	744	-	-
	80-81 95970 (38.27)	250790 (100.00)	3680	360	430	190	-	1960
3. Sarila	74-75 67618 (37.92)	178296 (100.00)	1333	-	11811	425	-	-
	80-81 159210 (48.64)	327330 (100.00)	2050	-	1690	200	-	1900
4. Gohand	74-75 88921 (42.72)	208168 (100.00)	403	42	34907	957	-	-
	80-81 134740 (37.29)	361370 (100.00)	980	130	2070	950	10	1350
5. Rath	74-75 60567 (37.24)	162649 (100.00)	77	8	13587	6590	184	-
	80-81 102860 (36.04)	285390 (100.00)	300	30	136900	2860	110	1040
6. Panwari	74-75 62524 (35.30)	177127 (100.00)	97	482	58266	1168	51	-
	80-81 114730 (35.41)	324050 (100.00)	180	40	35070	2480	90	1210
7. Charkhari	74-75 107679 (37.94)	283800 (100.00)	519	186	30708	1700	10	-
	80-81 190080 (36.83)	516110 (100.00)	1380	180	39300	2860	190	2900

Annexure - III (contd..)
(Quintals)

	1	11	12	13	14	15	16	17	18
8. Muskara	1974-75	72442	189354	1074	-	11023	744	205	-
	(38.26)	(100.00)							
	1980-81	166890	410900	1680	-	11410	380	580	2480
	(40.62)	(100.00)							
9. Maudaha	74-75	142710	379200	1702	119	1837	1275	31	-
	(37.63)	(100.00)							
	80-81	244130	606510	4130	-	2110	1340	460	5400
	(40.25)	(100.00)							
10 Jaitpur	74-75	41960	138726	254	1168	146191	1701	41	-
	(30.25)	(100.00)							
	80-81	69390	260830	260	500	116200	4010	130	1390
	(26.60)	(100.00)							
11 Kabrai	74-75	98826	281258	740	59	43306	2231	41	-
	(35.14)	(100.00)							
	80-81	167240	475590	1690	220	33800	3430	70	3690
	(35.16)	(100.00)							
DISTRICT	74-75	926450	2396570	8940	2360	478990	17960	583	-
	(38.66)	(100.00)							
	80-81	1614330	4232210	18680	1510	398450	19460	1640	28060
	(38.14)	(100.00)							

Note : Figures given in parentheses denote percentages to totals.

Source : Statistical Bulletin - Hamirpur, Office of the District Economics and Statistics Officer, Hamirpur.